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*A Sketch of the Mahomedan History of Cashmere.—By Lieut.
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The native authorities consulted in drawing up the following brief sketch of Cashmere History are as follows :

1. The Raja Tarangini (Persian translation of Kalhana pundit, carried on to the present day by later hands).
2. The History of Mahomed Azim.
3. The Ayeen Akbarie of Abul Fazl.
4. The History by Narrain Khol.
5. Ditto by Hyder Malik Chadwance and several other less well known authorities.

It had been my intention to have commenced the following sketch with the fabulous desiccation of the valley by Káshyapa, anterior to historical times, as related in the earliest existing chronicle—the Raja Taringini, but as that work has been translated and is accessible to those who take an interest in the subject, I have taken up the history from the point where that ancient record ceases, a continuation of which in the Persian language has, as above remarked, been brought down to the present day.

It must be remarked, however, that according to one Mahomedan author (I will not say authority) the records of the valley extend to a date long anterior to the fabulous Hindu tradition of its desiccation by the Muni Kashypa, an event which, from coincidence in the chronology, seems to point to the Mosaic deluge. The author

above alluded to* (Noor-ood-deen) begins his history of Cashmere with the creation, and according to him the valley was visited by Adam after the fall! The descendants of Seth reigned over Cashmere 1110 years, after which it was conquered by Hurrishunder Raja, whose descendants reigned till the deluge, after which event the country was peopled by a tribe from Turkisthan. Moses is said to have died in Cashmere, where he taught the worship of the one God. The people, however, afterwards relapsed into idolatry, a sin which was visited by the local inundation of the country and the tyranny of the demon Juldeo. After the desiccation of the valley by Kushef, fifty-five princes of the Korans reigned 1919 years. According to Bedia-ood-deen (the commentator of Noor-ood-deen,) the country was settled by Solomon, who set up his cousin Isaun as king. The worship of the one God still continued the national religion, till one of the kings lost his life in endeavouring to resist the progress of idolatry, which again gained a footing in the land, and from this time the brahminical faith seems, with one or two intervals of Buddhism, to have prevailed until about the period at which the present sketch commences.

1305 A. D.—About the year of the Hejira 705 Raja Sudeo ascended the throne of Cashmere, a prince of a tyrannical and feeble character, who, in a short time alienated the affections of his subjects by sundry acts of incapacity and oppression. At this period, a certain Mahomedan prince named Shahmir, who claimed a descent from Ali, assuming the disguise of a merchant's son, appeared in the country, and was assigned a village near Baramoola for his residence and support. Ambition seems to have prompted him to this, inasmuch as his grandfather Wuffoor Shah of Sawadgere had prophesied that Shahmir would one day become a king of Cashmere, which, it will hereafter appear, eventually came to pass; one amongst numerous instances of such prophecies containing the conditions of their own fulfilment.

Another chief named Sunkur Chukk, being driven away from Dardao, fled to Cashmere, and there took up his abode with his adherents; and thirdly, prince Ranjpoe, a son of king Yuftun of

* These facts I derive from Professor Wilson's *Treatise*, Vol. XV. Trans. As. Soc. never having met with the work of Shaik Noor-ood-deen.

Thibet, being forced to fly his country, appeared in Cashmere, and attempted to gain over to his cause Ramchund the hereditary commander-in-chief of the army of Cashmere, which chief assigned to him his fort of Koknigera for his residence. It will be seen that these three worthies either in their own persons or in those of their descendants played conspicuous parts in the history of the country.

Towards the close of Raja Sudeo's reign a Turk, Zoolkudr Khan, invaded Cashmere with an army of 70,000 horse from Kashmirra by the Baramoola pass, upon which the cowardly Sudeo immediately fled to Kishtewar. The Turks then sacked the country, where they luxuriated in plenty for six months; after which, provisions failing, they attempted to return, but perished to a man in the snow above the Deosir Pergunnah: previous to this their numbers had been reduced by war and luxury to 50,000. On their departure, anarchy ensued in Cashmere for a time; parties of robbers and independent zemindars infested the country.

On the flight of the king to Kishtewar, Ramchund, the commander-in-chief, had retreated to his fort of Koknigera, where he held his own during the subjugation of the country by the Turks.

The Raja of Thibet, Ranjpoe, deeming this a favourable opportunity of gaining possession of the throne, introduced himself with a few followers in the disguise of merchants into Koknigera, and slew Ramchund, whose daughter Kotereen he married. He then seized the vacant throne of Cashmere, and made Rawanchund, his wife's brother, commander-in-chief, and despatched him to Thibet as viceroy of that country. The fugitive king Sudeo, seeing this state of things, now attempted to return, but, meeting with no encouragement from his former subjects, again fled to Kishtewar and finally vacated his throne after a reign of nineteen years, three months and twenty-five days.

A. D. 1323.—Ranjpoe or Rinshan Shah being now established on the throne, made the prince Shahmir minister, and, although he had raised himself to the dignity of king by an act of violence, seems, when once his power was secure, to have ruled with wisdom and justice, and many acts in which these qualities were exhibited are recorded of him. He appears also to have been troubled with

doubts respecting religion, and the Mahomedan writers relate the following story of his conversion to the religion of Islam. Perceiving the folly of idolatry, he prayed earnestly to God to afford him some guide in his search of truth; it was at length vouchsafed to his troubled mind that the religion of the person who should first meet his sight on arising in the morning was the one it was right for him to adopt. It so happened that the Faqueer Boolbel Shah of Thibet, engaged at his morning prayers, was the first person upon whom his eyes fell. Struck with the sight he requested an explanation, became convinced and accepted the religion of Islam and assumed the name of Sudder-Udeen. Ramchund and many other nobles were converted at the same time.

It is proper to add that the Hindu writers entirely ignore the conversion of Ranjpoee who died after a reign of two and half years, leaving his widow the queen Kotereen, A. D. 1326, regent. This princess now raised to the throne and married Udeen Deo the brother of Sudeo, the issue of which marriage was one son. No sooner had this king mounted the throne than his country was invaded by an army of Turks who, under the command of Urdil, marched across the Pir Pinjal to Hurpore, upon which the timid Udeen Deo fled towards Thibet, but Kotereen with the courage of her race, rallied her forces around her, called in her brother Rawunchund, the commander-in-chief, and the wuzzeer prince Shahmir to her aid, by whose assistance, after several battles, she brought the Turks to terms. It was arranged that the latter should leave the country immediately and be allowed to retire unmolested. Their retreat being effected, the queen recalled Udeen Deo her timid consort, but his subjects, indignant at his desertion of them in the hour of danger, would never pay him the respect due to a sovereign. He died after a reign of fifteen years, leaving queen Kotereen a second time sole regent of the country. A. D. 1341, She now removed her court to the fort of Indr Kote, where she resided in peace for five months, but during this period the eyes of men were gradually turned towards prince Shahmir who had commenced a course of intrigue, the result of which was the merging of the whole real power of the state into his own hands. Still restrained by some scruples of conscience, he at first sent the Queen

proposals of marriage, which being rejected with scorn, he prepared to extort her consent by force of arms and invested Indr Kote with a large army. The heroic Rajpootnee made every effort to defend herself and sustain a siege, but at length, her brother Rawunchund being dead and finding herself unsupported and declining in power, she, in the last extremity, consented to espouse the successful usurper. Upon this, hostilities ceased, and preparations for the marriage were commenced, A. D. 1341, but the devoted princess despairing and indignant, surrounded by her train of maidens, rode slowly forth from the beleaguered fort, advanced into the presence of the usurper, and upbraiding him for his ingratitude and treachery, stabbed herself before him. Thus perished by her own hand the last Hindoo sovereign of Cashmere and Prince Shahmir ascended the throne as Sultan Shums-ood-deen.

Independent Kings.

Prince Shahmir, usually considered the 1st Mahomedan King of Cashmere, ascended the throne in the year of the Hejira 742, A. D. 1341, and assumed the name of Sultan Shums-ood-deen, but died after a short reign of three and half years. He was succeeded by his eldest son Jumshéd, A. D. 1344, who however after enjoying the throne for little more than a year, was defeated and slain by his younger brother Ala-ood-deen, who forthwith ascended the throne. Of this prince little is recorded except that he reigned in peace for twelve and a half years, and was succeeded by his son Shahab-ood-deen, A. D. 1356, who having repaired the devastations caused by the former invasions of the Turks, which had impoverished the country for the last few reigns, turned his attention to foreign conquest and during the succeeding ten years subdued A. D. 1350, Thibet, Kashgar, Budukshan and Cabul. He then, according to the historian Hyder Malek, with an immense army (of 50,000 horse and 500,000 foot) invaded Hindustan by way of Kishtewar and Nugger Kote, and is said to have worsted Firoz-shah, King of Delhi, in a pitched battle on the banks of the Sutlej, the result of which was to cause that potentate to acknowledge his supremacy. Shahab-ood-deen then returned to Cashmere, where his religious zeal led him to destroy the idol

temples at Bijbiharee and elsewhere, and it was probably under compulsion that the chief of the powerful tribe of Reyna, (Ajil Reyna of the Chunds of the Nargaon Pergunah,) at this time became a convert to the religion of Islam. Sultan Shahab-ood-deen died after a reign of nineteen years and was succeeded by his brother Kootub-ood-deen, A. D. 1376, who appointed Abdie Reyna commander-in-chief. During this reign, the famous Syud Allie Hamadanie arrived in Cashmere, and his advent is recorded in the following couplet which also contains the date, Hejira 790 (A. D. 1388.)

سال تاریخ مقدم اورا جوئی از مقدم شرایف او سنه ۷۹۰

This celebrated Syud was a fugitive from his native city of Hamadan where he had incurred the wrath of Timoor. Seven hundred Syuds are said to have accompanied his flight to Cashmere, where he remained six years and which he named the "Garden of Solomon," (Bagh-i-Soliman.) He died at Puklie whilst on his return to Persia. His son Meer Mahomed Hamadanee, also a fugitive, brought in his train 300 Syuds to Cashmere, where he remained twelve years.

These two immigrations of fugitive Syuds fixed the religion of the country and were doubtless the chief cause of the religious persecutions which ensued in the following reign.

They established shrines all over the country, many of which remain to this day. They originated the sect of "Rishees" or hermits, which are described by Abul Fazl as a very respectable and inoffensive order, in his time some 2,000 in number, living upon fruits and berries and abstaining from sexual intercourse. Their numbers, however, afterwards declined until they became quite extinguished by the courtiers and creatures of the Emperors of Delhi.

Mahomed Azim the historian enumerates many worthies of this sect, a few of the most celebrated of whom I have added in a note, leaving the historian to be consulted in original by such readers as feel interest in the pretended miracles and holy acts of Mahomedan saints. Some of the stories, however, are sufficiently amusing.

To resume—Cashmere having been, previous to this influx of zealots, in a transition state as to religion, the advent of a Mahomedan

saint such as Syud Allie seems to have been hailed with enthusiasm, and proselytism to have commenced in real earnest. Meantime Kootub-ood-deen died after a reign of near sixteen and half years, A. D. 1393, and was succeeded by his son Sultan Sikunder, during whose reign a constant succession of learned doctors appeared in Cashmere, attracted doubtless by the fame of a new Mahomedan acquisition, A. D. 1397. At this time also (H. 800,) Timoor Lung invaded India, and presents passed between him and Sikunder. Preliminaries were arranged between their respective vakeels for a meeting near Attock, and Sikunder had actually set out, but Timoor had already passed on to Samarkand, taking with him a son of Sikunder as a hostage. Partly by the influence of Timoor and partly no doubt urged by the fanatic Moslèms who had lately appeared in his country, Sikunder was about this period instigated to religious persecution; he began to throw down the Hindoo temples and images "by fire," and to force his subjects to abjure idolatry: he thereby acquired the surname of "Bhutshikan" or "Iconoclastes." It seems probable that he employed the agency of gunpowder, A. D. 1393, in his destruction of the temples, a present of which, it has been suggested by an author upon Cashmere Antiquities (Cunningham), he might have acquired from Timoor, as it appears established that the use of that explosive was known to the nations of central Asia in the 14th century. Sikunder died after a reign of twenty-five years, nine months, leaving the throne to his son Sultan Allie Shah, (1417) who inheriting to the full his father's fanaticism, but being without his energy and talents, after reigning six years and nine months, left the government in the hands of his brother Zein-ul-ab-ood-deen and set out on a pilgrimage to Mecca. On his arrival however at Jummoo, he was dissuaded by his father-in-law, the Rajah of that place, from proceeding further and accordingly commenced his return to Cashmere by way of Pukli, A. D. 1423, but his brother refused to surrender the government, and a severe battle ensued in which the king was taken prisoner, confined, and soon after died, perhaps from poison.

A. D. 1423.—Zein-ul-ab-ood-deen or "Boodshah" now mounted the throne, and soon after invaded Kashgar and Thibet with an army of 100,000 foot and 20,000 horse.

This prince improved the country more than any of his predecessors. He built bridges, towns, and forts, (Zein Knddnl, Zein-pore, Zein Kote, &c.) and erected at Naoshera a noble palace (twelve stories high, each story of fifty rooms): he constructed the Lank island, upon which he built a mosque and a summer-house (to be seen there to the present day) on the site of an ancient temple, whose summit was at that time visible above the waters of the Wmler Lake (1443): he also enlarged and beautified the city of Srinugur his capital. This great prince encouraged literature and the fine arts; he introduced into the country weavers from Turkisthan and wool from Thibet; and many manufactures, such as paper-making, glass-making, book-binding, &c. owe their introduction in Cashmere to his fostering care. He was well versed in the literature of his age, acquired several languages and translated books. He collected a library and invited to his court learned men of all kinds—amongst others Jumal, a Hindustani, became “Kazi” of Cashmere, and a sort of inquisitor general into the religion of Islam. Zein-ul-ab-ood-deen was also a poet and added to his other qualities a love of field sports. The rising power of the Chukk tribe did not escape the penetrating eye of the king who prophesied, they would some day be rulers of Cashmere, a prediction which eventually proved correct.

Altogether Cashmere seems to have made a great step towards an improved civilization during the reign of this great prince, which extended over a period of fifty-two years. He died in 1474, and was succeeded by his son Hyder Shah, A. D. 1474, who after reigning little more than a year was killed by a fall from his palace, A. D. 1475, and was succeeded by his son Sultan Hussan, a prince of a very voluptuous and sensual character. Hitherto a tribute of twelve lakhs of rupees and a thousand horses had been exacted from the surrounding states, which, now encouraged by the king's indolence, asserted their own independence, and thus only Cashmere proper remained to him. However Tazie Khan, his commander-in-chief, invaded the Punjaub with a view of chastising the chief of that country, Tattar Khan, who had afforded aid to the rebels. This king Sultan Hussan reigned twelve years in excess and drunkenness, when he died leaving the throne to his

son Mahomed Shah a child of seven years of age, destined in after life to experience more of the vicissitudes of fortune than usually falls even to the lot of kings. Encouraged by the circumstances of the king's youth, A. D. 1487, (A. H. 893,) his uncle Futteh Shah, the brother of the late king, was tempted to aspire to the throne, and on the pretext of invading Hindustan, he managed to get the king's army under the commander-in chief Mullick Saifdar out of the country, and during the temporary absence of the youthful king, who accompanied the army on the expedition, was appointed viceroy, and was on the point of throwing off his disguise when the sudden return of the king Mahomed Shah disconcerted his projects for the time.

After a short interval however he entered into a secret alliance with Sirung Reigna and Mullick Shums Chukk, chieftains of Cashmere, whose combined forces defeated the king's army under Mullick Saifdar, and forced Mahomed Shah to vacate the throne, after reigning two years and seven months. Futteh Shah thus obtained temporary possession of the throne and made Shums Chukk, commander-in-chief and minister, A. D. 1489. Thus things remained some two and half years, after which a party headed by Meer Syud, Ibrahim Magrey, Mullick Hadjie Padr, and Abdie Reigna, gradually brought together their adherents and defeated Shums-ood-deen Chukk, and his nephew Kajee Chukk, who fled to the Kamraj, where they took refuge in their strongholds, A. D. 1492.

Upon this Mahomed Shah regained his throne and Meer Syud Mahomed and Mullick Moosa Reigna became ministers. Mahomed Shah then followed the Chukks into the Kamraj as far as Sopur, and his army took and destroyed their stronghold of Taragaom. Determined on revenge, however, Shums Chukk still kept the field with a party of horse, and meditated a night attack upon the king who was encamped at Sopur; this project however coming to the king's knowledge, he ordered the bridge over the river Jhelum at that place to be destroyed, and preparations were made to receive the enemy. At the dead of night the Chukks, led by their brave chieftain, swam the river, and fell upon the king's camp. A sanguinary conflict ensued, which, notwithstanding all his efforts,

ended in the defeat of Shums Chukk, who was again forced to seek safety in his mountain fastnesses. Upon learning this disaster Futteh Shah fled to Hindustan, but soon afterwards returned on the invitation of his victorious nephew. Although thus generously forgiven, this old intriguer soon recommenced his former practices, formed a party and prevailed so far that Mahomed Shah, A. D. 1499, was a second time forced to abandon his capital, and take refuge with Mullick Moosa Reigna, who still held his own estates and maintained a desultory warfare.

Futteh Shah thus, a second time, gained possession of the throne, making his faithful adherent Shums-ood-deen Chukk minister; A. D. 1499, but his enjoyment of it was but brief: Moosa Reigna, rallying his forces, took the field and signally defeated the usurper's army in a pitched battle, taking his opponent Shums Chukk prisoner. So dangerous a rival could not be allowed to live, and accordingly the Chukk was put to death in his prison, after having, it is said, killed no less than sixty of his executioners before he fell, as is related in the following couplet well known in Cashmere legends.

بہنگ و بچوب و بخشت و بمشت ملک شمس چک شمت کس را بکشت

A. D. 1501.—Mahomed Shah being absent in the Punjaub, Futteh Shah was suffered by the successful Reigna, after some negotiation to retain the name of king, whilst he himself exercised its real powers for nearly nine years, until about the year 916 H., (A. D. 1510.) Futteh Shah, finding himself a mere puppet, attempted to set up Mullick Ibrahim Magrey in opposition, who however was soon forced to provide for his safety by flight. The tribe of the Dangrees now got the upper hand for the space of forty days, and set up Mullick Asman, but the Chukks, under Kajee Chukk, now aroused themselves and got the better of the Dangrees. A state of anarchy and scramble for power succeeded, in the midst of which Futteh Shah fled as far as Hurpore, on his way to Hindustan, but being there met by Ibrahim Magrey, who professed himself ready to stand by him, he was encouraged to return to the capital, and he reigned one year longer. At length the fugitive monarch Mahomed Shah determined on an effort to regain his throne, collected an army in the Punjaub, and marched, A. D. 1512, towards Cashmere by

the Pymouth, (now Paonch) road. A strong party in Cashmere also, at the head of which were Sunkur and Nusrut Reigna, declared for the legitimate king. Nevertheless Futteh Shah, being supported by Ibrahim Magrey and others, advanced into the Kamraj to meet the enemy; a great battle ensued at Poshkur, in which Futteh Shah was totally defeated, and fled to Hindustan; the two sons of his chief adherent Ibrahim Magrey were taken prisoners and his party broken.

A. D. 1512.—Mahomed Shah then mounted his throne for the third time, but was not permitted to reign in peace beyond nine months, inasmuch as Futteh Shah, who had been sufficiently dispirited by his defeat to remain quiet thus long, at length, regaining confidence, despatched his son Hubbeeb Khan (whose mother was of the Chukk tribe), to Cashmere, where he succeeded in forming a close alliance with the Chukks and other discontented parties, and as a preliminary, it was arranged that in the event of success, one-third of the country should be set apart for Kajee Chukk, one-third for Jehangire Padr, and the remainder for Sirung Reigna; Futteh Shah himself receiving a general tax from the whole. Upon this the pretender in person came to Cashmere and a battle ensued in the Bongil Pergunnah, in which Ibrahim Magrey (now a staunch supporter of the king Mahomed Shah) was killed, with his two sons; and the king's army totally defeated. Upon this Mahomed Shah, A. D. 1515, abandoned the country, fled to Hindustan, and solicited aid from Sikunder Khan Lodi, who granted him an auxiliary force of 30,000 horses, A. D. 1515, with which he marched towards Cashmere. Meantime Futteh Shah had assumed the government, but no sooner did the nobles of his party (Kajee Chukk, Jehangire Padr, Nusrut Reigna), &c. hear of the approach of Mahomed Shah, with such an overpowering force, than each sought to make his own terms and tendered his submission to the king, whereupon Futteh Shah fled for the fourth and last time, and Mahomed Shah preceding the bulk of his army, arrived in Cashmere with 2,000 light horse and mounted his throne for the fourth time, making Kajee Chukk his minister and throwing Sirung Reigna into prison. The latter, however, he soon after liberated, for we find in the year A. D. 1519, that chief together

with his former master Futteh Shah, died in exile amidst the mountains of Hind.

A. D. 1519.—It might have been now expected that, his rival being dead, Mahomed Shah would at length have been left in the peaceable enjoyment of his throne, but although indeed he continued to bear the title of king, he was a mere puppet in the hands of his ministers; and his country from his last accession to the throne till his death in the year A. D. 1537, was the scene of incessant intestine struggles for power amongst those powerful nobles in whom rested the real power of the state. From this period until the subjugation of the country by the Emperors of Delhi, the history of Cashmere is little else than a record of the wars of the tribes of Chukk, Reigna, and Magrey, in which, the former two were chiefly at variance, the Chukks generally having the upper hand, and eventually a decided preponderance of power. To follow the details of these petty wars seems needless, and indeed the various historians of the period differ considerably from each other in their narration of events: The frequent mention also of various chiefs bearing similar names, renders it still more difficult to trace any consecutive history; the following facts, however, may be shortly enumerated as occurring from about the time of Mahomed Shah's last accession to the throne in the year A. D. 1519.

Nusrut Reigna and Sohur Magrey were both killed in battle.

Kajee Chukk, the king's minister, quarrelled with his old ally Jehangire Padr, and forced him to fly the country: (in the year A. D. 1520.)

Mullick Abdie Reigna, and Sohur Magrey, brought prince Sikundar Khan, a son of Futteh Shah, with a large army from Hindustan; Jehangire Padr and others joined them, and amongst them they set up Sikunder Khan for the throne, Kajee Chukk despatched his son Musood Chukk against them, (A. D. 1520,) who met them in the Lar Pergunnah, but was defeated and slain; Prince Sikundar however finding the Chukks, as yet, too strong for him, retreated into the mountains. After this Kajee Chukk became so powerful that the king Mahomed Shah, becoming jealous of him, formed a party of Magreys in opposition, who, taking

him at unawares, forced him to fly to Naoshera, with his adherents : he was there met by another enemy, namely, an army of Turks who were advancing under the command of Shaik Allie with a view of invading Cashmere ; these however he worsted and succeeded in effecting his escape from the country. He remained in exile some eight months, after which he contrived to make up matters with the king, who had begun to find his new supporters more troublesome than the Chukks. He accordingly returned, and, countenanced by the king, dispersed the Reignas and Magreys ; the chief of the former he seized and the latter fled. (A. D. 1528.) Kajee Chukk now openly dethroned the king, who was driven into exile, and set up his own son Sultan Ibrahim. Encouraged by the want of unanimity amongst the nobles of Cashmere, the surrounding nations seem, at this period, to have been continually on the watch for opportunities of effecting its conquest, and several armies of these nations at different times, actually entered the country and took part in its intestine struggles.

The Magreys allied themselves to Allie Beg, who brought 20,000 horse, and their combined forces met Kajee Chukk in the Bongil Pergunnah ; that chief behaved with his accustomed bravery, (A. D. 1528,) but many of his family having fallen or been taken prisoners, he at length reluctantly left the field. The Magreys then got the upper hand and Allie Beg returned to the Punjaub. Encouraged by the internal weakness of the country, the surrounding tributary states now also began openly to revolt, and in the year (H. 937,) 1530 A. D. Mirza Kamran Chogatai instigated by his brother, (A. D. 1530,) the Emperor Humaioon, who that year ascended the throne of Delhi, and who until his attention was distracted by his own troubles, seems to have had his eyes on Cashmere (the ancient national chronicle of which country the "Raj Taringini" was first translated by his orders) advanced with an army of 30,000 horse as far as Naosherah. The danger being imminent, the nobles in power turned their eyes on their former enemy, the brave and wise Kajee Chukk, (A. D. 1530—7,) whom they solicited to return and fight for the common cause. He accordingly joined them, and the allied forces of Cashmere, signally defeated the army of Mirza Kamran in a pitched battle near the

city of Srinugger. Soon after this, Syud Khan with an army of Kashgurries, and Mirza Hyder with 14,000 horse invaded Cashmere by the Lar Pergunnah ; the Cashmeries being unable to give battle, took to the hills, but during the winter made some head against the invaders ; and although in one affair alone they lost 1,600 men, they succeeded in bringing them to terms. It was stipulated that Sikunder Khan Kashgurrie should marry a daughter of the exiled king Mahomed Shah who was himself married to a sister of Kajee Chukk, who was thus uncle to that Princess : upon this the Kashgurries left the country.

The king Mahomed Shah died in exile in the year H. 944, and was nominally succeeded, successively, by his eldest son Shums-ood-deen Shah, who reigned for one year, (A. D. 1537,) and by his second son Ismaïul Shah who married a daughter of Kajee Chukk, the actual ruler of the country. At length Kajee Chukk, feeling jealous of the Magreys, made war on them, but being worsted, was forced to take to the mountains : the return of Reygie Chukk however from Jummoo soon enabled him again to take the field : a general rally of the Chukks ensued, which led to the defeat and dispersion of the Magreys, whose power being thus effectually broken, Kajee Chukk ruled in peace for three years, and, as far as the distracted state of the country admitted, turned his attention to its improvement and to the administration of justice. It was not, however, fated that he should longer retain the throne he had so hardly won.

A. D. 1540.—In the year of Hejira 947, his kinsman Reygie Chukk and Abdal Magrey, entering into an alliance, called in the aid of Mirza Hyder, a foster brother and faithful adherent of the Emperor Humaïoon (A. D. 1540). That chief, under the stipulation he should enjoy the real powers of sovereign, consented to set up Tarkh Shah, a boy, son of the usurper Futteh Shah, (see page 416 et seq.) as king of Cashmere ; and advanced with a considerable army. Kajee Chukk being alarmed, entered into an alliance with Shere Khan* Affghan, then in rebellion against Humaïoon, and gave him his niece (a daughter of Mahomed Shah) in marriage.

(* Afterwards Shere Shah.)

A battle ensued, in which, however, Kajee Chukk was defeated, and fled across the Pir Pinjal as far as Thannah, where he died. He is related to have been of a kind and merciful disposition, and, except in battle, never to have shed the blood of his enemies. I may here remark that mercy towards the vanquished appears to have been (with a few exceptions) a characteristic of the gallant tribes which so long withstood the invasions of surrounding enemies, and at length, only succumbed to the weakness arising from intestine dissensions, and the fatal error of calling in foreign aid.

A. D. 1540.—Mirza Hyder, being now established, made Abdah Reigna his commander-in-chief, but coined in the name of Tarkh Shah. He was in power ten years; he set to work to clear the country of the powerful nobles, many of whom he put to death or banished. Reygie Chukk paid the penalty of his rashness in calling in a foreign ally, being forced to fly the country. Soon after the accession to power of Mirza Hyder, his patron, the Emperor Humaioon being forced to fly to Persia, (A. D. 1542,) the usurper Shere Shah ascended the throne of Delhi; the same year also, during the misfortunes of his father, was born in exile the future Emperor Akbar, destined at no very distant period to exercise dominion over the fair province of Cashmere, (A. D. 1540—51,) the brightest jewel of his crown. Left to his own resources, Mirza Hyder turned his attention to alliances with the surrounding states, always hostile to the influence of Cashmere, and ready to side with any invader against that country; he introduced armies of those nations, especially Kashgurries, with a view of securing a counterbalance to the power of the native nobles, who, for a time, being helpless, acquiesced in this state of things.

A. D. 1551.—At length a party of the Cashmere nobles, (Hussan Magrey, Quaja Heigie, Abdie Reigna, and others) entered into a conspiracy, having for its object the defeat and dispersion of the foreign armies in detail. With this view in the character of confidential advisers, they persuaded Mirza Hyder to detach his forces to the frontiers, and selected Dowlut Chukk to accompany the principal army consisting of Kashgurries. No sooner was this effected than Dowlut Chukk, instructed in the part he was to play, seized the person of the commander of the Kash-

gurrie army (a nephew of Mirza Hyder) and communicated this success to the other conspirators, who immediately threw off their disguise and fell upon the army of that chief, (now without a leader), and the other detached forces, all of which they defeated; and then, combining their own army, boldly advanced to give battle to Mirza Hyder himself.

A. D. 1551.—He, however, having placed his family and treasure in the Fort of Indrakoul, resolved upon making a night attack upon the rebellious nobles; with this view he, one day, went out alone to reconnoitre the enemy's position and, ascending a tree for that purpose, was there discovered and slain by one of the hostile spearmen (a butcher) who on challenging him, detected his foreign accent.

Thus perished (H. 959) the intrusive governor, who however had done much for the country during his term of power, having introduced many artisans and manufacturers. The conquerors spared all his family, who retired to Hindustan.

Abdie Reigna now came into power for a short time, but the Chukks under the leadership of the three sons of Kajee Chukk, (Gazie Khan, Hussein Khan, and Allie Khan,) rallied their forces, and drove away Abdie Reigna, (A. D. 1552,) who fled towards Hindustan, but his foot being caught by the branch of a vine on the road, he was dragged off his horse and killed by the fall, having enjoyed the supreme authority one year. The Chukks, having now the upper hand, made Hubbeeb Khan (son of the famous Shums-ood-deeu Chukk) ruler of Cashmere, with Dowlut Chukk for his commander-in-chief. At this time a great earthquake occurred, which lasted seven days and destroyed many of the principal buildings, and considerably altered the channel of the river Jhelum; in fact it was during this earthquake, that the course of the river Jhelum, being turned, produced that change in the relative positions of the two cities of Hussanpoora and Hussainpoora, which the superstition of the Mahomedans has magnified into a miracle well known in Cashmere legends.

Dowlut Chukk, the commander-in-chief, at this time married the widow of his uncle Kajee Chukk: enraged at this proceeding her eldest son Gazie Khan, having caught him off his guard, seized

him and put his eyes out. Many stories are related of the prowess and gigantic strength of this brave chief, amongst others of his shooting an arrow two koss; to this day it is said the pillars raised to commemorate the deed are to be seen; he is also said, whilst at the court of Delhi, to have arrested the progress of an elephant by seizing the animal's tail! There is doubtless exaggeration here, but the Chukk tribe generally seem to have been endowed with a physique beyond the ordinary run of men, and, as before stated, (page 420). Cashmere superstition attributed their extraordinary strength and stature to a supposed descent from a "serpent god."

As before related, Hubbeeb Khan (A. D. 1552,) was at this time king of Cashmere, but appears to have been a man of little capacity.

Gazie Khan gradually acquired popularity, till at length the king, having one day disgusted all present by some act of folly in open Court, his crown was snatched from his head by Allie Khan, brother of Gazie Khan, to whom Allie presented it; and, that chief being hailed as king with acclamation, Hubbeeb Khan was forced to resign power. During this reign, notwithstanding the king's feeble character, many of the tributary provinces which had been wrested from the crown of Cashmere, were recovered by his armies. Meantime the blinded Dowlut Chukk, together with the chiefs of the tribe of Reigna, had proceeded to Delhi, A. D. 1555, to crave the assistance of the Emperor Humaioon who had lately regained his throne and was then at that city. He, however, happened to be killed the very day of their arrival by a fall from his palace wall. Thus disappointed, the Reigna entered into an alliance with a certain Ameer of Kashgur, who was at this time at the court of Delhi, and with his aid raised an army for the invasion of Cashmere; with that purpose, advancing as far as Kuspa, there encountered the enemy. A great battle ensued, which lasted two days; the first day's fighting, although indecisive, was so far favourable to the Chukks, that the Reigna considered it proper to send his ally off the field, but he himself renewed the battle the following day; he was however taken prisoner, and put to death by the victorious Gazio Khan: 4,000 men were killed on both sides in this battle.

Two years after this battle the king put down (A. D. 1557,)

another revolt, having for its object the restoration to the throne of Hubbeeb Khan, in which the latter was killed by an elephant.

After this, his possession of the throne was again disturbed by a nephew of Mirza Hyder, who invaded Cashmere with an army of 12,000 Moguls from Kashgur. The Cashmere army headed by the king in person advanced to Lohar Kote to meet them: upon the eve of battle Gazie Khau promised an ashrafee (about 16 Rs.) for every head of an enemy: A battle ensued in which the king was completely victorious, and 7,000 heads of the enemy were presented to him after the engagement: he is said to have exceeded his promise and to have disbursed two ashrafees per head.

A. D. 1557.—This prince seems to have been a just, but a very stern ruler, and it is related of him that he put to death his own son for having, in a fit of passion, killed his uncle, who had carried him an order from the king his father to appear at Court, which the fiery youth resented; he is said however to have exhibited remorse so far that he ever afterwards turned away his head when he happened to pass near the spot of execution. This able and energetic prince was also a poet and portioned out his time like our own Alfred. After reigning 9 years and 9 months, feeling the approach of old age, he abdicated the throne in favour of his second brother Hussain Khan, (H. 970,) A. D. 1562, who reigned in peace for five years; after which period however his (bastard) brother Sushkur Khan rebelled, and a battle took place at Kuspa (thus a second time the scene of a fierce engagement) in which the rebel chief was wounded and his army dispersed. Shortly after this event the king's little son Ibrahim Khan died of the small-pox, and the king himself was so struck with grief that he pined away and, five months afterwards, died. Hussain Shah (A. D. 1570) was succeeded by the third brother Allie Shah. At this time the descendants of Zein-ul-ab-ood-deen made some head and advanced as far as Neosherah, upon which Allie Shah despatched his nephew Lohur Khau with 5,000 horse against them, who defeated them by a stratagem. The king also put down a rebellion in Kishtewar. During this king's reign, there was a great famine which lasted for three years, arising from excessive falls of snow; during the two first years of this calamity the king expended

his entire revenue and private property on the relief of the people, which resources at length failing, he ordered his nobles to contribute their share to the public necessity. On enquiring of a noted fuqueer into the reason of the continued snow, he was told in reply that it would only cease on his death, which in fact took place from a fall from his horse within the year. He reigned ten years and was succeeded by his son Yoosuf Khan. (H. 988,) A. D. 1580.

Soon after the accession of this king a rebellion was headed by his uncle, who however was slain in battle and the revolt suppressed. The king's proud and overbearing character soon alienated the hearts of his nobles, who formed a conspiracy against him : some fighting occurred near the city on the plain near the Eedgurh, in which 300 in all, fell on both sides ; the same night, however, the king sent his crown to his minister and commander-in-chief Syud Mobarruck and retired to the hills of Hind.

Syud Mobarruk after ruling two months, finding himself opposed by the nobles, in his turn resigned the crown in favour of Lohur Khan, (A. D. 1580,) who proved a very just and good ruler.

In his time, adds our chronicle, there was such a plenteous season that rice sold for two maunds a "pice!" Yoosuf Shah now applied to the Emperor Akbar for assistance to enable him to recover his kingdom, but, the Emperor hesitating to forward his views, he went to Lahore and there raised a small force, at the head of which he marched towards Cashmere, in hopes of being joined by others who still adhered to his interests in that kingdom ; nor was he mistaken. On his arrival at Neosherah many nobles joined him with their followers, and thus re-inforced he gave battle at that place, which action, although indecisive, gained him some advantage ; he then advanced to Rajawer, the Rajah of which place joined him with his forces, and several more Cashmere chiefs came over to him with their adherents : meantime Lohur Khan, with the bulk of his army was at Hurpore, (A. D. 1581,) awaiting the enemy's approach, and now endeavoured to out-manceuvre him by a rapid march to Baramoola (? Barumgulla). Yoosuf Shah, however, marched to his flank, crossed the Pir Pinjal by an intermediate pass

(of Firozepore) and got to Lohur betwixt him and the Capital, where he received additional reinforcements from the Kamraj. Lohur Khan however immediately made a forced march with 12,000 horse and 25,000 foot and endeavoured to turn his position.

After some manœuvring Yoosuf Khan left the armies in position against each other, and proceeded to the capital by water, defeating a party of the enemy who endeavoured to oppose his entry. He immediately took possession of the throne, distributing presents and shewing himself publicly to the people, (A. D. 1582.) On hearing of this proceeding Lohur Khan followed his rival to the city, where finding himself unsupported by popular feeling he concealed himself in the house of Kasi Moosa, but was soon discovered and brought before Yoosuf Shah who put his eyes out.

Yoosuf Shah, being thus again established on the throne, abandoned himself to voluptuous enjoyments. Displeased with his course of life, and seeking doubtless, for a pretext for invading the beautiful province of Cashmere, the Emperor Akbar summoned him to appear at the imperial court. He was at first inclined to resist this assumption of authority, but complied so far with the Emperor's orders, as to send his younger son Mirza Hyder in his stead, but upon Akbar's threatening "to tread Cashmere under foot of horses," (literally), he despatched his eldest son Yakoob Khan (A. D. 1582,) with magnificent presents to deprecate his wrath. About two years after this, it happened that the Emperor Akbar was engaged in a war with Rajah Neelkunt, against whom he was about to despatch an army, when Yakoob Khan, who, up to this time had remained at court, requested to be allowed to undertake alone the adventure of capturing this person, which he in fact achieved by seizing the Rajah whilst bathing in the midst of his camp, and dashing away with him, with a few followers mounted on fleet horses. He was however but ill rewarded for this service, being confined by the Emperor on the plea of his being insane, and, indeed, he seems to have been of a wild unsettled character and likely to cause trouble. He however soon after effected his escape and returned to Cashmere with the Emperor's consent. Akbar now summoned the king Yoosuf Shah (A. D. 1584) to present himself in person at his court, then at Lahore. The nobles, however,

refused to allow him to leave the country, although he himself, alarmed at the near proximity of the Emperor, expressed his readiness to comply, and even went so far as to imprison his son Yakoob Khan. Seeing this state of things, the Emperor despatched an army of 50,000 men under Bugwan Dass to enforce compliance. That leader experienced a check near Attok, but Yoosuf Shah, fearing the ultimate consequences, secretly withdrew from his own army and delivered himself up to Akbar's general, who sent him under an escort to Lahore, where Akbar delivered him over to the custody of his police minister Todar Mull, who kept him under surveillance at that city for upwards of two years, (A. D. 1585,) after which he was sent in command of 500 horse in company with Rajah Maun Sing to Bengal, where he died of grief and despair (1587). On the flight of Yoosuf Shah his army called upon his son Yakoob Khan to lead them. A second battle ensued, in which the Emperor's army was defeated with the loss of 3,000 men, and was afterwards reduced to such stress amongst the mountains of Hoozara, from cold and want of food, that they are said only to have sustained life by slaughtering their elephants and sleeping within their still warm bodies. The imperial army being thus repulsed, Yakoob Shah (A. D. 1585,) ascended the throne of Cashmere over which he reigned one and half years. Although of a bravery approaching to recklessness (a quality which usually commands the respect of men) this prince was possessed but of little judgment and unfit to rule. He was also of the Shiah sect of Mahomedans, the Soonee sect being the predominant one in Cashmere, which circumstances combined to render him obnoxious to his nobles, a party of whom headed by Shums-ood-deen Chukk, Alumgire, Magrey, Allie Dar, and Hussan Mullick broke into open revolt and a struggle, which lasted seven (7) days, ensued in the capital city of Srinugger, but neither party being victorious, a conference took place and the Kamraj was guaranteed to the nobles. The truce was however soon broken through, owing to the insolence of the Shiah priests, and hostilities recommenced, which ended in the rebel nobles being forced to retreat to the mountains of the Kohihama. The Shiah priests, who seem to have possessed great influence over the king's mind, now instigated Yakoob Shah to still

greater outrages (A. D. 1585,) against the rival sect of Soonees, whom he compelled to call aloud the Shiah confession of faith (*على ولي الله*) to their great scandal. The Kazi of the city refusing to do this, they put him to death by tying him to the tail of an elephant, and in that manner dragging him through the city. The Soonee historians relate, that on this occasion, such a noise thundered from the surrounding mountains, that several ladies of the king's zenana, who were near their time, became mothers on a sudden.

This act of cruelty and oppression determined the Emperor Akbar to subjugate the country, and accordingly he despatched an army of 30,000 horse under his admiral Kasim Khan and the fugitive Hyder Chukk, who entered Cashmere by the Hurpore pass. Nothing daunted, Yakoob Shah, though with an inferior army, marched to engage the enemy, and drew out his forces in order of battle, but being at this crisis deserted by his nobles, (A. D. 1586,) he was forced to fly across the mountains to Kishtewar with an escort of 60 horse. Kasim Khan now obtained possession of the capital, (A. D. 1586,) but soon after jealous of the respect paid to his colleague Hyder Chukk by the native Cashmeries, imprisoned him. Yakoob Shah however was by no means of a disposition to surrender his country without a struggle; he rallied round his standard a few gallant spirits, advanced from Kishtewar, and after several desperate actions with detachments of the Emperor's army, in which he was generally successful, he made a rapid march and suddenly appeared on the hill of the Takt-i-Soliman overlooking the city of Srinugger, where he pitched his camp.

Kasim Khan now attacked him with his whole army, and a desperate conflict took place in which Yakoob Shah (A. D. 1586,) although worsted with the loss of his commander-in-chief Shums-ood-deen Chukk and many other of his principal adherents, still retained his position.

The Chukks now determined to make one desperate effort for the independence of their country, and rallied round the brave Yakoob Shah who still sternly held his ground on the Takt-i-Soliman. This gallant tribe, now a mere handful of men, fell with inconceivable fury upon the Emperor's army, and fairly drove it into the city,

where the soldiers took refuge in the palace, fort and other strongholds, where they remained in a state of siege.

The Emperor, finding his army insufficient to reduce the country, reinforced it with 20,000 horse under Mirza Yoosuf Khan. Upon the approach of this force, Yakoob Shah (A. D. 1587,) despatched Lohur Chukk to defend the passes, who however, being far outnumbered, was unable to offer any serious opposition to the enemy's advance.

In consequence, Yakoob Shah was a second time forced to retreat to Kishtewar, and Yoosuf Khan superseding the admiral, became governor of Cashmere and rewarded his allies with grants of money and land. (A. D. 1587).

The Emperor Akbar now announced his intention of visiting his newly acquired province, and accordingly the following spring proceeded by the Pir Pinjal. The governor Yoosuf Khan went forward as far as Barungulla to make his salutations, and conducted his sovereign with due state to Cashmere, which may be considered from this date to have passed from the hands of its ancient rulers under the sway of the Guznivide throne.

The native historians indeed date the ascendancy of the power of Delhi from the (A. D. 1588) arrival of Kasim Khan (Hej. 995) 1586 A. D. who always appears first in their lists of Soobahdars. The country cannot, however, be said to have been totally reduced to the condition of a province until the year 1592, inasmuch as large bands of the Chukks hovered in the mountains taking advantage of every opportunity of disturbing the intrusive governors, who from this time were periodically appointed from Delhi, nor indeed was it till the time of Etekaad Khan (1622) who hunted down the Chukks and put them to death as robbers and outlaws, that this fierce tribe was totally subdued.

After viewing the country, Akbar returned towards Cabul by Puklee, where Yakoob Shah, upon his safety being guaranteed, presented himself before the Emperor.

A. D. 1588.—No sooner however, had Akbar departed, than the governor, being opposed by the native nobles, was reduced to such stress that he applied to Delhi for re-inforcements, but their arrival being delayed by the snows of winter, which at that season render the

passes impracticable, Mirza Yardgar, a noble, proclaimed himself king and besieged the governor in the city of Srinugger. The Emperor however, on the opening of the season, sent a picked army against him under the command of Shaick-Furreed-Bukshee. On its approach towards the relief of the city of Srinugger, whilst hesitating to engage so superior a force, Mirza Yardgar was treacherously murdered by Sharock-Beg and Ibrahim-Kakur, who presented his head to the Emperor's general.

A. D. 1592.—The Emperor himself now followed in person and was received with every demonstration of joy by the Cashmeries. Being spring, he remained in the valley during the entire summer, but on the approach of winter returned to his capital, leaving Mahomed-Koolie-Khan as Soobadar, with Todar Mull to assist him in reducing the country to order.

As we now find Cashmere (although disturbed by the incursions of the Chukk tribe, who still wandered unsubdued in the hills) reduced to the condition of a province of the Guznavide throne, it seems a proper point to close this portion of its history.

PART 3RD.—*Cashmere under the Emperors of Delhi.*

A. D. 1586.—The native historians of this period, with the exception of Abul Fazl, agree in their arrangement of considering Cashmere to have passed out of the hands of its ancient rulers, and to have become an integral portion of the empire of Delhi from the year A. D. 1586, (H. 995,) in which date, we have seen Kasim Khan obtained possession of the city of Srinugger. Abul Fazl however closes the first portion of his history with the flight of Kajee Chukk to Hindustan (H. 947,) in the 1540, and the establishment of Mirza Hyder on the throne of Cashmere, which thus, according to him, passed under the sway of Humaioon Emperor of Delhi, but as that chief was soon dispossessed of his throne and slain, and as after him several native princes reigned for short periods, it does not seem advisable to follow his arrangement on this point, which was no doubt adopted with a view of flattering his Emperor and patron Akbar.

The second portion of his history moreover commences with the visit of Akbar to Cashmere. (1587.)

We have seen also that in the year 1587 A. D., the admiral Kasim Khan was relieved by Yoosuf Khan the 2nd Soobadar, who, after being in power five years, was in his turn succeeded by Mahomed Koolie Khan on the departure of Akbar in the year 1592 A. D., with which event also we closed our last chapter. (A. D. 1592.)

There is some discrepancy of dates amongst the several authorities about this period, some historians giving six years, and others eleven years, as the term of Koolie Khan's government. Abul Fazal also records a third visit of the Emperor Akbar to the valley, and he is probably correct; but in general the accounts of the various Emperors' visits to Cashmere are singularly curt and void of interest; indeed it seems to have been reserved for an European (Bernier) who long afterwards visited the valley in the train of the Emperor Aurungzebe, to give any thing approaching a graphic account of the pageantry we may suppose to have accompanied their progresses. Of the several governors also little more is recorded than their names, dates of appointment, and terms of government. The following few facts, however, derived from various sources, appear to have taken place and may be briefly recorded.

A. D. 1592.—As before mentioned (page 432.) Todar Mull, the celebrated police minister of Akbar, was entrusted under the Soobadar Mahomed Koolie Khan, with the task of bringing the country into a proper state of subjection.

It was therefore, probably at his recommendation that the fort of the Harrieparbut or (to use the Mahomedan name) the Koh-i-Maran was constructed, with a view of overawing the capital. It was finished about the year 1597, A. D. at a cost of £1,100,000. Means were at the same time adopted of rendering the native Cashmerians less warlike, and of breaking their old independent spirit. Amongst other measures to effect this, I have been informed (but have nowhere seen it recorded) as a fact very generally believed in Cashmere, that the Emperor Akbar caused a change to be introduced in the dress of the people.

In place of the ancient well-girdled tunic adapted to activity and exercise, the Emperor substituted the effeminate long gown of the present day, a change which led to the introduction of the enervating *kangni* corresponding with the French *Chauve-chemise* or

pot of charcoal fire; without which a modern Cashmeree is seldom seen, A. D. 1597. And it is possible, that this measure, one out of a long series of acts of systematic tyranny and spirit-breaking oppression, may have had its effect in changing the character of this once brave and warlike race; for at the present day although remarkable for physical strength, the natives of Cashmere are totally wanting in all those qualities for which they were formerly distinguished. Whilst, however, thus carrying out the severe policy suggested by his minister as regards the inhabitants, it must not be supposed that the beneficent Akbar neglected the improvement of his fairest province; on the contrary, in addition to his acts for the amelioration of the condition of the ryots, he appears to have done much towards the embellishment of the country, which he adorned with palaces and gardens, and beautified by the introduction and cultivation of various trees and shrubs.

A. D. 1600.—He erected at an expense of £340,000 (thirty-four lakhs of rupees) the noble palace of Nagur Nagur below the Harrieparbut, of which however, scarcely a trace exists; and the celebrated Poplar Walk (which remains to this day a memorial of his taste) attests his magnificence.

He introduced an improved breed of large horses, as before his time the country only contained ghoonts and yaboos.

Our chronicle records cherries as owing their introduction into the valley to Akbar; this fruit, being in small quantities, has always been considered royal property in Cashmere, and was afterwards named (*شاہ الو*) “king apples” by Jehangire.

He commenced many other works of public utility, which his successors completed.

The East India Company was founded in 1600.—It was perhaps about the beginning of the 17th century that the Emperor visited his province of Cashmere for the third and last time, about which period also, a power was organized in a far distant land, destined, before two centuries had set, to exercise dominion over the magnificent Empire which then called him master; of all his provinces the fair valley of Cashmere being now nearly alone in its independence of that beneficent rule. Under Akbar Kabool and the intervening countries (Puklie, Bhimber, Sewad, Bijore, Kanda-

har, Zabulistan) were incorporated with the Soobah of Cashmere, and its annual revenue may be estimated a little short of one million sterling. (See Appendix). The standing army of the whole was 94,800 horse, and there were 37 garrisoned forts in various parts of the country, containing 2,400 foot or artillery. In the year 1604, A. D. Nawab Koolinj Khan was despatched from Delhi as Soobahdar of the country, but owing to the death of the Emperor Akbar, which took place in the succeeding year, (1014 H.) he only remained one year, during which a severe famine occurred. Akbar, dying at the age of 64 after a reign of fifty-two years, was succeeded by his son Selim, (A. D. 1605,) who assumed the name of Jehangire and the following year appointed Mirza Allie Akbar viceroy; (A. D. 1606,) but it seems doubtful whether this Soobahdar ever exercised power in his proper person; in fact according to the historian Hyder Mullick (who, however, it must be confessed is not generally to be trusted where the history touches his own times) the vicerealty of Cashmere was at this time exercised by Hyder Mullick (himself) and Allie Mullick (his brother) nobles of Cashmere, and he omits the two last named Soobahdars from his list altogether; the former indeed is omitted in several lists I have met with. The same author relates that in the year H. 1015, (1606 A. D.) Kootub-ood-deen Khan and other Mogul Koti chiefs made an attempt to dispossess Yoosuf Khan, (?) but were defeated; perhaps the system of Naibs had already commenced. Mirza Allie Akbar, after a power of four years (whether exercised personally or not) was succeeded successively by Hashim Khan (A. D. 1610,) for three years by Nawab Safdar Khan (A. D. 1613,) for two years, and by Ahmed Beg Khan (A. D. 1615,) for three years, during whose tenures of office no event of importance occurred. At length Dilawer Khan (A. D. 1617,) became governor of Cashmere, and shortly afterwards reduced Kishtewar to its allegiance; the Mullicks of Shahabad being his allies and advisers (Hyder Mullick). During the time of this Soobahdar, the country was visited by a pestilence, and shortly afterwards the great mosque or Jumma Musjid, built by Sikunder Butshikan, together with 12,000 houses in the city were consumed by fire. The father of the historian Hyder Mullick (who was of the Shiah sect) was accused of having

been concerned in the conflagration, and, at the instigation of Noor Jehan Begum, he was compelled to rebuild it at his own expense. It had been twice partially destroyed by fire before, and rebuilt, once by Hussan Shah, and again by Ibrahim Magrey.

A. D. 1619.—The Emperor Jehangire, urged thereto by Hyder Mullick (if we may believe the historian's own assertion), now determined upon visiting Cashmere, and was conducted by the Pynwutch (now Poonch) road under guidance of Mullick Hyder Rais-ul-moolk-chogatai (to give him his full titles). This noble afterwards became a protégé and confidant of Noor Jehan Begum, and conducted many works of improvement and utility. Cashmere having been surveyed and reduced to order in the time of the Emperor Akbar, having also been beautified with palaces and gardens, little else remained for his son and successor, the magnificent Jehangire, than to enjoy the delights of this eastern paradise, in company with his empress, the peerless Noor Mahal whose romantic spirit appears to have led her lord and emperor to roam into the most secluded and picturesque recesses of the valley, many of which pleasant retreats, are to this day pointed out as the spots where the royal pair were wont to disport themselves in those days of regal abandon.

A. D. 1621.—Again in the summer of 1621 the emperor honored the valley with a visit for the second time. A successor had the previous year been appointed to Dilawer Khan, in the person of Iradut Khan, who is said to have built a beautiful palace for the emperor at Naopoor, and afterwards chopped off the Master Mason's hand to prevent his again executing a similar work of art: he however conferred on him great wealth as a compensation for his loss. After being in power two years, he was succeeded in 1622 by Nawab Etekaad Khan, a cruel governor, who commenced a systematic destruction of the Chukks, whom he hunted down and put to death. Bands of this fierce tribe still infested the surrounding hills, especially the range to the north of Cashmere, from which strongholds they issued on their predatory excursions. This crusade had the effect of almost exterminating that ill-fated tribe, the descendants of which at the present day, are the professional horse-keepers of the valley, and in their character, still in some degree display remnants of that ancient independent spirit, which led to their destruction.

A. D. 1624.—The highways being somewhat cleared of these turbulent spirits, Jehangire again paid a visit to Cashmere in the summer of 1624 A. D. and built many palaces and summer-houses, more especially he completed the construction of the celebrated Shalimar gardens immortalized by poets and travellers. The Naseem (or salubrious) and Nishat Baghs was the fancy of Noor Jehan Begum, to whose taste also many other beautiful retreats owed their origin. The ruins of palaces at Manasbul, Echibul, Virnag, &c. attest her taste in selecting picturesque sites.

Three years after this the emperor visited Cashmere for the 4th and last time, (A. D. 1627,) (or according to Mohammad Azim for the 7th) but on his return towards Hindustan, died at Rajawer, whence his body was conveyed to Lahore and there buried. His widow Noor Jehan Begum, took up her residence at Lahore after Jehangire's death, where she employed her leisure for the remaining twenty years of her life in constructing a magnificent tomb for her late lord and emperor. زینت شرع ۱۰۳۷

Shah Jehan succeeded to the empire of Delhi in the year A. D. 1627, but Etekaad Khan still remained viceroy of Cashmere, notwithstanding that the people of that country, groaning under his tyranny and exactions, despatched an embassy to complain of his oppression to the new emperor.

At length in 1633 A. D. Zufr Khan was appointed to succeed him, and the following year the emperor paid a visit to the valley in person, where he amused himself with sporting and planting gardens; amongst others he built the beautiful summer-house in the Shalimar gardens. The emperor again visited the country whilst Zufr Khan was governor, who also improved the country much, and introduced fruit trees and flowers, from Kabool. He did not confine his supervision moreover to embellishment, but invaded Thibet, and took the fort (Ladak) thereof which he annexed to the Soobahdarie of Cashmere. In his time religious disturbances betwixt the rival sects of Shiahs and Soonees took place.

In the year A. D. 1640, Prince Morad Buksh of Delhi visited Cashmere, and married a daughter of the Mullicks of Shahabad: he ruled the country for one year, and upon his departure (A. D. 1642,) Allie Murdan Khan was sent as Soobahdar, but was

relieved the following year by the emperor's favourite Zufr Khan (second time) who remained in power four years, during which period Shah Jehan (A. D. 1645,) visited Cashmere: he was succeeded by Tarbiat Khan in whose time a famine occurred, (A. D. 1647;) after two years Hussein Beg Khan (Usbuk) (A. D. 1649,) succeeded, whose tenure of power was also two years. Allie Murdan Khan now became Governor of Cashmere for the second time. A. D. 1651.

This nobleman was governor of Lahore as well as Cashmere, and was in the habit of spending the winter season at the former city, and proceeding to Cashmere on the approach of spring each year. For his convenience in these journeys (A. D. 1651,) he built many Seräis along the roads leading into Cashmere, some of which remain to this day; his travelling expenses are said to have amounted to a lakh of Rupees (£10,000) each trip. In this governor's time there were "bread-riots" in which many lost their lives.

The emperor visited Cashmere in the summer of 1061 H., and was accompanied by many poets and savants: amongst the former, a certain Hadjie Mahomed Jan, a Persian, composed a poem on the country, but appears to have been more impressed with the difficulties of the road than the beauty of the landscape. He compares the sharpness of the passes to the "swords of the Feringees," and their tortuous ascents to the "curls of a blackamoor's hair!"

رہی پیچید تراز موئی رنگی بہ تندی چون دم تیغ فرنگی

Of all the emperors of Delhi, Shah Jehan appears most to have affected the strains of poets and musicians, and, as they and the courtiers increased in the land, the Rishees and devotees, for which Cashmere had been so celebrated, receded like game before the hunter, into the most dreary solitudes, and were in danger of becoming extinct amidst the discouragements of this festive court, until they again recovered under the subsequent reign of the orthodox Aurungzebe. A. D. 1657, (H. 1048,) Luskur Khan succeeded Allie Murdan, and during his short tenure of power, so severe a winter occurred, that the river and all the lakes were frozen over, hard enough to admit of passage on their surface. This year also the emperor Shah Jehan was deposed by his son

Alumgire or (vulgo) Aurungzib and confined for life in the fort of Agra, where he died (H. 1076). رضي الله عنه ١٠٧٦

A. D. 1658.—Aurungzib being confirmed on the throne appointed Etimaad Khan Soobahdar in the year 1660 A. D. of whom I can find no other record. In the year 1662 A. D. (or according to others 1664 A. D.) Ibrahim Khan son of Allie Murdan Khan was sent to Cashmere as Soobahdar.

This year also the emperor commenced his progress to Cashmere, and here we fortunately possess the graphic pages of Bernier, who accompanied Aurungzebe as state physician; these give us a lively picture of the state and magnificence of an imperial progress; according to him the emperor's cortège set out from Delhi on the 6th December, (A. D. 1663,) at 3 P. M. that hour having been pronounced an auspicious one by the court astrologers.

It consisted of 35,000 horse and 10,000 foot, 70 pieces of heavy cannon, and 50 or 60 light field-pieces, or (as it was called) "stirrup artillery." Roshenara Begum accompanied the emperor, and our physician enlarges upon the spectacle of her stately train of elephants on the line of march.

A. D. 1664.—The army arrived at Lahore, 25th February, and crossed the Pir Pinjal about the beginning of April; during the passage an accident occurred, several of the elephants being pushed over the precipices, and many of the ladies of the royal zenana were killed on the spot. The Emperor remained three months in Cashmere; on his departure Ilsam Khau was appointed Soobahdar: it is recorded of this ruler that he rooted up all the mulberry trees which formerly grew in front of the great Eedgurh, as their fruit dropping, soiled the clothes of the faithful collected for prayers: however he planted the present magnificent chenar (plane) trees in their stead. Thus do Cashmere chronicles abound in the most insignificant facts affecting their native country. The following year (A. D. 1665,) Saif Khan was appointed to succeed, in whose time Hussein Mullick (son of Hyder Mullick the historian) was put to death by order of the emperor for speaking disrespectfully of the Prophet. Saif Khan was a stern tyrannical governor, but was soon succeeded by Mobazir Khan, (A. D. 1667,) during whose term of power the king of Kashgur passed through

Cashmere on his way to Mecca, and was, by order of the emperor, presented with half a lakh of Rupees (£5,000) and equipments for his pilgrimage. Mobazir Khan was himself a good well-intentioned man, but his Usbeg guards oppressed the people and even murdered many, on which account he was recalled by the emperor, (A. D. 1668,) and Saif Khan re-appointed governor. An earthquake occurred the following year, but did no great damage. Saif was succeeded by Iftikar Khan, (A. D. 1671,) but did not leave Cashmere, which he adopted as his residence, and where he seems to have held a sort of court. About this time a great fire again partially destroyed the Jumma Musjid and a great part of the city of Srinugger.

A. D. 1675.—Hawam-ood-deen Khan ruled three years. Ibrahim Khan was appointed a second time, (A. D. 1678.) He commenced his rule under unfavourable auspices; during the first year great floods, and the following year severe earthquakes did much damage to the country. Religious disturbances also broke out between the Shiahs and Soonees; however, notwithstanding these domestic calamities, this governor invaded and conquered Thibet. He was succeeded by Hefzoola Khan, (A. D. 1685,) who, however, after a short sojourn, appointed Abul Futteh Khan as his Naib and proceeded to court. A famine occurred.

A. D. 1689.—Mozuffer Khan appointed governor. He proved to be a very tyrannical ruler, so much so, that the people showed signs of rebellion, and he was compelled to fly the country after ruling one and a half year; however, his brother Aboo-nusser Khan (A. D. 1691,) succeeded him, and he also was a tyrant. Fazil Khan (and Kasi Khan) succeeded (A. D. 1697) a good governor, who improved the city in many ways; during his time also a hair of the prophet Mahomed arrived from Mecca, and was deposited in the mosque at Hazrat-bul on the banks of the Bhut Dul. After being in power three and half years Fazil Khan was at his own request relieved by Ibrahim Khan A. D. 1701 (for the 3rd time). This governor was ordered by the emperor to invade Kashgur, but excused himself on the plea of insufficient means in men and money; upon this his successor was appointed, Nawasish Khan, who was on his way to assume his government when news of the emperor's death reached him, upon which he seems to have returned to Court, and never to

have reached Cashmere. The emperor Aurungzib died at the age of ninety-one (A. D. 1706,) in the year 1181 Hej. (دخل الجنة ۱۱۸۱).

It is amusing to observe the extravagant praises which our orthodox historian Mahomed Azim, whom I have chiefly followed about this period, confers upon Aurungzebe, whom he infinitely prefers to the noble and enlightened Akbar, of whom he complains that he "treated all his subjects alike!" not favouring the Mahomedans above the Hindus.—Was ever a nobler tribute paid to a ruler? Shah Alum succeeded to the throne of Delhi, (A. D. 1706,) and despatched Jaffer Khan to relieve Nawazish Khan who does not seem to have assumed the functions of government; he proved to be a bad governor and a mob set fire to his residence.

He died at Cashmere of drink and excess, and, according to the record of his death, must be faring badly at present. جان جفرخان contains the date Hejira 1121, (A. D. 1709). ۱۱۲۱ سنه ۱۱۲۱

The nobles now assembled and elected Aruf Khan Naib of the country, as a temporary measure, until the Emperor's pleasure should be known. Shah Alum (A. D. 1709,) accordingly appointed Ibrahim Khan, (fourth time) who was at this time governor of Kabool and Peshawar and who died shortly after his arrival in Cashmere; Aruf Khan thus remained Naib. Nawazish Khan now at length became governor. A great fire and floods occurred in his time. He was succeeded by Anatoola Khan (A. D. 1711,) who left Aruf Khan as his Naib, upon whose death however within the year, he appointed Mushuruf Khan, his own son-in-law, Naib, and himself departed on a pilgrimage to Mecca. He was however superseded on the accession of the Emperor Firokshere (1712) the following year. Anatoola Khan was of Cashmere descent. (A. D. 1712). This year Shah Alum died at the age of seventy-one, and was succeeded by his son Firokshere, whose mother was a Cashmerie.

His elder brother Jehandar Shah had gained possession of the throne for a few days and made the son of Anatoola Khan his Wuzzeer: Firokshere therefore on gaining the mastery put his brother to death and imprisoned the latter forty (40) days. He bestowed upon Syud Khan Bahadoor the Soobahdaree of Cashmere, who despatched Allie Mohamed Khan as his Naib. A rebellion broke out in the hills about Puklie which however was put down by

the Naib, who exercised such severities on the occasion that he was recalled, (A. D. 1714,) and Azim Khan appointed in his place: however, after an interval of one year Allie Mohamed was reinstated as Naib of Syud Khan Bahadoor, (A. D. 1716). Ehteram Khan succeeded as Naib for one year. Anatoola Khan now returned from Mecca, was received with distinction by the Emperor Firokshere, who conferred upon him the Soobahdaree of Cashmere; he accordingly sent (A. D. 1717,) Meer Ahmud Khan as his Naib. The practice of appointing Naibs seems now to have fairly come into fashion amongst the great nobles of the Mogul court, who looked upon their appointment solely as a vehicle of extorting money from their respective governments. We may conceive that the condition of a province thus governed was not generally happy. The present Soobahdar, however, seems to have been a conscientious man, and selected his Naibs with a view to the faithful government of the country; but the first of them Meer Ahmed Khan had scarcely arrived when his government was disturbed by a fanatic named Motavie Khan, who excited serious religious disturbances, which the Naib was unable to suppress. The second Naib Abdoola Khan, (A. D. 1719,) who relieved him, met with no better success; at length the third Naib his successor Momind Khan succeeded in defeating and killing the fanatic Motavie Khan, but was still unequal to govern the country. Anatoola Khan meeting with no better success in the choice of his deputies, now requested to be relieved, and accordingly Saif-ood-dowlah (A. D. 1721,) was appointed to succeed him.

Meantime the throne of Delhi had been occupied by several puppet kings set up by Syud Hussan Allie Khan, Soobahdar of the Dekkan, who got the upper hand of the Emperor Firokshere, whom he imprisoned, blinded, and afterwards put to death.

A. D. 1718. The throne was then successively occupied by Rufiushan for five months and Rufiut-dowlah for six months, till in the year 1720, ظل رب سنه ۱۱۳۲, Mahomed Shah ascended the throne of Delhi, and soon after appointed Saif-ood-dowlah viceroy of Cashmere, who, however, only retained it six months; he then sent a Naib named Nujeeb Khan, who remained one year.

A. D. 1723.—This year Azim Khan was appointed Soobahdar; during his one year of power a famine occurred.

A. D. 1724.—Anatoola Khan now again (third time) undertook the government of the country, and appointed as his Naib Fageerood-deen, who remained for a few months over the year, when his patron Anatoola Khan died and was succeeded in the Soobahdaree by Acheedat Khan. The latter despatched Abul Burkat as his Naib who remained three years until a successor to his patron was appointed, Soobahdar Agher Khan (A. D. 1728,) who assumed his government in person at Cashmere: he countenanced tyranny and exactions on the part of his subordinates, of which malpractices the Cashmeries laid a formal complaint before the Emperor, but meeting with no redress, they took the law into their own hands, and stoned the obnoxious viceroy out of the city of Srinugger. Soobahdar Ameer Khan succeeded and reappointed Abul Burkat, (A. D. 1729,) the former Naib of the country, but after two years he superseded him by Ehteram Khan, in whose time there were bread riots and several grain-holders lost their lives.

Encouraged by the new Naib's unpopularity, Abul Burkat now rebelled and forced Ehteram Khan to fly the country. The Soobahdar Ameer Khan was now dispossessed of Cashmere by the Emperor, and Dileer Khan of Paniput appointed to succeed him, (A. D. 1735;) the latter however died at Lahore on his way to assume his government. Ameer Khan therefore remained Soobahdar one year longer, but being worsted in a battle with a rebel Rajah Jafr Khan, he fled to Hindustan. This year also the country was deluged by great floods, and an earthquake which lasted for three months caused considerable damage.

A. D. 1736.—Juleel-ood-deen Khan was now appointed Soobahdar, but met with no better success than his predecessor, in governing the country. Cashmere in fact, perhaps through the influence of Nadir Shah who was at this time engaged in subduing Kabool and Peshawar, seems to have been in a very disturbed condition; however Fakr-ood-dowlah, a noble apparently in the interest of Nadir Shah, drove away the rebel Jafr Khan and his allies into their hills, assumed a sort of regal state in Cashmere and administered the government on his own responsibility. Meantime Utteehoola Khan (as son of Anatoola Khan) had been appointed Soobahdar by Mahomed Shah, and sent a son of Mushuruf Khan named Aswaim-

ood-deen Khan as his Naib. He, however, on arriving in Cashmere, was imprisoned by Fakr-ood-dowlah, who soon afterwards appointed his own Naib Kazie Khan and left the country.

During his absence the imprisoned Aswaim-ood-deen Khan (A. D. 1736,) managed to escape and to get the upper hand of Kazie Khan, who fled. Cashmere has now, since the beginning of the century, exhibited the spectacle of a province governed by the creatures of an absent ruler, himself the courtier of the supreme Emperor, who, in his turn, by this time of the declension of the Mogul power, was generally a mere puppet in other hands, and but little his own master. Observing this, it can scarcely excite surprise that the various Naibs should have taken advantage of the state of things, and endeavoured to render themselves more or less independent.

In fact from about this time we shall find most of the governors of Cashmere in common with those of the other provinces of the tottering Mogul throne, little short of independent rulers. In the year Hejira 1151, (A. D. 1738,) Nadir Shah having overrun Kabool and Peshawar, set out on his invasion of Hindustan, and on his arrival at Lahore was met by Fakr-ood-dowlah, whom he appointed viceroy of Cashmere, and then resumed his march towards Delhi. As his progress during the invasion belongs to the general history of India, we need not to follow it further than as it effects the province whose history is our subject. The battle of Paniput ensued, in which many Cashmerie nobles, officers of Mahomed Shah, were slain, and Delhi was subsequently sacked by the soldiers of Nadir Shah. After due submission to the conqueror, Mahomed Shah was reinstated on the throne, and thus Cashmere still remained a province of the Mogul empire.

Meantime Fakr-ood-dowlah had returned to Cashmere, of which he remained master for forty days, and coined in the name of Nadir Shah. The Cashmeries however, (A. D. 1738,) objecting to an Emperor of the Shiah sect, turned out his Soobahdar in an *éméute*, and, shortly afterwards the news arrived that Nadir Shah had spared the province to the Emperor Mahomed Shah, who in fact the following year bestowed the Soobahdaree on Anatoola Khan (A. D. 1739,) who appointed Abul Burkat his Naib, and followed in person three months afterwards. A quarrel soon ensued between

them and some fighting took place, which terminated in the death of the Soobahdar by the hand of an assassin. Abul Burkat, however, does not seem to have been privy to this act; indeed Mahomed Azim the historian of the period, expressly affirms his innocence.

A. D. 1740.—Abul Burkat having thus thrown off his allegiance, sought alliances amongst the surrounding tribes. The Rajah of Kishtewar especially sent troops to his assistance, and with their aid he succeeding in putting down all present opposition to his power. The usual effects of foreign alliances however soon developed themselves, and the Kishtewaries plundered the city and country. The following year a comet was visible in Cashmere, to oriental superstition ever associated with portents of war, or other extraordinary events.

A. D. 1741.—In fact the same year Asud Khan was commissioned by the Emperor to proceed to Cashmere and reduce the refractory Naib. At his instigation the Rajah of Paonch attacked Abul Burkat and his allies, 500 of whom fell in battle: notwithstanding this reverse however Abul Burkat still held out, (A. D. 1745,) nor was it till the arrival of Shere Jung Bahadur, the Naib of the Nazim Sufter Jung, that he, four years afterwards, was induced to surrender his government and present himself at the court of Delhi, where he died the same year. (Hej. 1158).

Shere Jung had scarcely remained six months when Afrasiab Khan succeeded as viceroy of Cashmere, (A. D. 1745,) over which he exercised a vigorous rule for nearly nine years. At this time the accumulated phenomena of ages would appear to have burst forth on the devoted inhabitants of the happy valley; during the two first years of Afrasiab Khan's government, a dreadful famine occurred, during which it is said that slaves sold for four pice (about a penny) each. The famine produced its natural result, a pestilence, which swept away many thousands of the people; an eclipse also added to their terror, and storms of rain followed by floods, carried away all the bridges.

In the year Hejira 1160, (A. D. 1747,) Nadir Shah was murdered, and his successor Ahmed Shah, having expressed some intention of visiting Cashmere, the nobles secretly despatched a

letter inviting him to take possession of the country ; the letter was however intercepted by Afrasiab, and the nobles finding their plans discovered, openly rebelled against the Soobahdar, and set up (A. D. 1747,) Asmutoola Khan as governor of Cashmere, for the Emperor Ahmed Shah Abd-allie ; he succeeded in gaining possession of the city for a day or two, (A. D. 1747,) when he was shot by a soldier of Afrasiab Khan who resumed the government, but died shortly afterwards by poison. His son Ahmed Allie Khan a boy, was maintained as his successor for one-half month ; after which Mullick Hussan Khan a Cashmerie was in power some three months, when the nobles wrote to Mahomed Shah to name some governor of the country. He accordingly appointed for the present, until his successor should arrive, Meer Ahmed Mokeem, who, however, after ruling five months, was attacked and driven away by Abul Kasim, a son of Abul Burkat.

A. D. 1752-3.—This year Ahmed Shah Abd-allie being at Lahore, the fugitive Meer Ahmed Mokeem presented himself before him and craved assistance. The Emperor accordingly despatched a force under Abdoola Khan Ashuk Akarsu to his aid. The Mogul governor fled at his approach, and the victorious Abdoola Khan, setting aside his powerless ally, seized the country, and, during the six months he remained as governor, plundered and extorted a crore of rupees from the unhappy valley already exhausted (A. D. 1752,) by pestilence and famine, with which he presented himself before his master Ahmed Shah ; having left Rajah Sookh Jewan as his mooktear. Cashmere thus passed from the sway of the Mogul throne, under that of the Dooranees, and we shall accordingly here close that portion of its history.

PART 4.—*Cashmere under the Dooranee Governors.*

A. D. 1753.—Abdoola Khan, the first Dooranee governor, having left Rajah Sookh Jewan as his mooktear departed from Cashmere, which was again desolated by a famine. No sooner, however, was his back (H. 1167,) turned, than a general impatience at Dooranee rule manifested itself. Rajah Sookh Jewan, placing himself at the head of the movement, began to form a confederacy amongst the surrounding hill tribes, and to entertain soldiery which gradually swelled

into an army of 40,000 men. Thus backed he considered himself powerful enough to resist Ahmed Shah to whom he refused to pay any tribute, and being a popular man and a good and just governor, seems to have aimed at rendering his country independent and himself a king; but a terrible punishment was in store for the ambitious Rajah. The wrath of Ahmed Shah (A. D. 1754,) had long been kindled against the refractory Cashmeries, but his attention had been distracted by more important matters, until on his return to Lahore in the year 1754 A. D. he was at leisure to turn his eyes towards the rebellious province and deemed it a favourable opportunity of chastising the leader of the insurrection.

He accordingly entered into an alliance with Runjeet Dehn of Jummo, guided by whose advice and aid he despatched an army under Noor-ood-deen Khan to invade Cashmere. Sookh Jewan collected his allies and advanced to meet him at the head of 50,000 men; he was however deserted by his nobles, seized and blinded by the successful Noor-ood-deen, who sent him in chains before the Emperor Ahmed Shah under whose horse and those of his courtiers the unfortunate man was trampled to death.

In his misfortunes he cried :

چشم از وضع جهان پوسیده به سر بسر احوال آن نا دیده به
گردهی سیرس دید زهرت عوض زین سیاه مار جهان ترسیده به

A. D. 1754.—Noor-ood-deen Khan then became governor of Cashmere, over which he ruled with moderation for more than eight years; he was then recalled by Ahmed Shah, who replaced him by Bullund Khan Soodozie (A. D. 1762.) He proved a good governor, but endeavoured to restore the exhausted country and remitted all taxes, for which reason falling, like his predecessor, under Ahmed Shah's displeasure, he was recalled after two years, (A. D. 1764,) and the good Noor-ood-deen Khan installed a second time as governor. He, however, after a short time, hearing he was to be shortly superseded, anticipated his orders, and leaving his nephew Jan Mahomed Khan as Naib, proceeded to Kabool to plead his own cause before the Emperor. Nevertheless Ahmed Shah (A. D. 1765,) appointed Kurrum Khan governor, who retained for three months an uncertain tenure of power, his authority being resisted by a certain Lall Khan. Observing this, Faqueer Khunt attacked

Kurrum Khan, and drove him out of the country, after which he sacked the city of Srinugger. Noor-ood-deen Khan (A. D. 1766,) was now for the third time sent by the Emperor as the only person capable of managing the country. He advanced with a considerable army. Faqueer Khunt attempted to oppose him, but finding his force insufficient to face the enemy, fled to Bombah, where he died. Noor-ood-deen Khan now ruled with great severity one year; after three years he was again relieved by Kurrum Khan, (A. D. 1769,) who however, being a weak, timid man, was unable to control the turbulent spirits of Cashmere, and fled to Jummoo; whereupon his commander-in-chief Ameer Khan Sher Jewan seized the valley on his own account, and refused to send tribute to the Emperor: to strengthen his position he built the Sher Ghunie (thus named after himself and not Sheregurrie or Shiahgurrie). The island called Sona Lank also owes its origin to this chief. He also sought to ingratiate himself with the Hanjies or boatmen of Cashmere, who are in fact sturdy fellows whose cordial support might be useful to a well concerted defence of the valley. Ameer Khan seems, in fact, to have altogether thrown off his allegiance to Ahmed Shah, and to have maintained an independent court of his own; which he maintained until the death of Ahmed Shah Abd-allie; that Emperor's son, however, (A. D. 1773,) Timoor Shah, having succeeded to his father's throne of Kabool, despatched Hadjie Kurreemdad Khan as Nazim, backed by a large army to enforce submission. Ameer Khan met him at Baramoola and a battle ensued, which ended in the defeat of the latter, who fled to Kishtewar, but was seized and sent to Timoor Shah, who, however, pardoned him after a short time. Hadjie Kurreemdad Khan was governor of Cashmere six years, and died there. (A. D. 1776,) Shocks of an earthquake which lasted three months occurred during his rule. His son Asad Khan succeeded to the government, (A. D. 1783,) and soon discontinued the tribute to the Emperor. He was however a very cruel ruler, on which account a conspiracy to put him to death was formed against him by some of his household officers; he was wounded in the scuffle, but contrived to escape to the river, collected some troops and drove the conspirators into the fort, where he besieged them for seven days; after which, endeavouring to escape, they were

seized and burnt to death by the cruel Asad Khan, who now became more tyrannical than ever, and, according to the expression of the historian, "killed men like birds." Stories are told of his extreme cruelty; amongst others a story is current in Cashmere of his throwing into the fire his own infant child who it appears had offended his cleanliness. At length (H. 1200,) the Emperor Timoor Shah (A. D. 1785,) despatched an army against him under Muddud Khan Sakzie, who succeeded, after a long campaign, in defeating Asad Khan, who fled to Poonch, but receiving no asylum there, he shot himself. Muddud Khan then assumed the temporary government for four months, (A. D. 1787,) when Meerdad Khan Kasijie succeeded him, but died after seven months: Moola Jaffer Khan (A. D. 1788,) succeeded for three months; till the arrival of Jooma Khan Kasijie, who was governor for four years, during which period he went several times to pay his respects to the Emperor. He died in Cashmere, and Ramootoola Khan succeeded for three months and twelve days, (A. D. 1792). Meer Hazar Khan Kasijie was then appointed Soobahdar: but soon afterwards Timoor Shah died and was succeeded by his son Zeman Shah, (A. D. 1793.)

A. D. 1793.—Taking advantage of Timoor's death Meer Hazar refused tribute and set up for himself; upon which the new Emperor Zeman Shah despatched Mirza Khan, (al-Kozyie) the rebellious governor's father, to endeavour to bring him to his allegiance. Meer Hazar Khan however imprisoned his father on his arrival, and openly threw off all allegiance to the Emperor; who shortly afterwards sent an army under Ahmed Khan Shihungechee Bashee to bring him to his senses. Hazar Khan however closed the Baramoola road, and suspecting some of his Hindu retainers of treachery, bound them in large cooking vessels, (or boilers) and thus threw them into the river Jhelum. He was nevertheless defeated and fled to the city, where he took sanctuary in the Shah Hamedan Mosque, but he was enticed out, thrown into prison and sent before the Emperor. He had enjoyed power little more than a year.

Ahmed Khan after remaining three months in Cashmere was relieved by Kaffyat Khan, and proceeded to Kabool with Hazar Khan and some other prisoners. Kaffyat Khan after nine months

left the government in the hands of Buddur-ood-deen his Naib, but returned the following year. He was a very splendid ruler, by which perhaps he incurred the Emperor's displeasure, as the following year, he was superseded by Mahomed Khan Jewan Shere who, on arriving at the Sheregurrie, imprisoned Kaffyat Allie. The latter's party, however, headed by his kinsman Meer Khau, rebelled and released him shortly afterwards. (A. D. 1795). Things being in this state at Cashmere, Shah Zeman himself visited the country, accompanied by his Wuzzeer Sher Mahomed Khan Mooktar-ood-dowlah, and made prisouers of all the conteuding parties. After remaining eight days the Emperor departed, leaving the government in the hauds of Abdoola Khan Kasijie, who ruled with judgment for the space of oue year; when he went to pay his respects to Shah Zeman. It was about this time that the Wuzzeer Wuffadar Khan, who had in fact been instrumental in placing Shah Zeman ou the throne of Kabool, defeated a conspiracy and put to death Sirfraz Khan (father of Dost Mahomed) and twenty-two others of the principal chiefs of the Barukzyies; Futteh Khau, eldest brother of Dost Mahomed, and a younger brother named Azim Khan alone escaping the massacre to Herat. Abdoola Khan having paid his respects at court returned to Cashmere, and cultivated the friendship and alliance of the nobles of that country.

A. D. 1796.—He also gradually eutertained au army of 30,000 men, by which measures he incurred the jealousy of Wuffadar Khan Wuzzeer, and was suddenly recalled to Kabool, and imprisoued in the Bala Hissar: (A. D. 1800). On his road to Kabool he had married a daughter of the Rajah of Mozafferabad, to which chief, as well as his younger brother Attar Mahomed Khau, (whom he had left as Naib during his abseuce) he now wrote, ordering them to hold out the country against the uew Naib Moola Ahmed Khan.

A. D. 1801.—Shah Zeman shortly afterwards invaded Hindustan, and had puenetrated as far as Lahore, when the iutelligence reached him that his own brother Mahomed Shah of Herat, together with the fugitive Futteh Khan, had invaded Kabool in his abseuce: he accordingly returned precipitately, abandoning men and guns on the road, which last were forthwith seized by Runjeet Sing, (A. D.

1801,) then rising into power. On his return to Kabool the unfortunate Zeman Shah was deserted by his nobles, seized, blinded, and imprisoned. His Wuzzeer Wuffadar Khan, by whose power he had been sustained so long, was put to death, and the triumph of the Barukzyies was complete. The unfortunate Zeman Shah in his misery composed some couplets, which have since passed into household words amongst his countrymen. I may here remark on the singular habit of orientals, on the approach of death or other misfortunes, like the fable of the dying swan, singing their own elegies in doleful strains; which are frequently gravely recorded by the native historians as matters of history. To return, however, to the more immediate history of Cashmere.

A. D. 1800.—Abdoola Khan had been confined in the Bala Hissar, and, as before stated, Moola Ahmed had been despatched as Naib to assume the government of Cashmere; but on his arrival, the latter was imprisoned by Attar Mahomed Khan, son of Abdoola Khan; who together with Futteh Khan Rajah of Mozafferabad, were now encouraged to resistance by the news of Shah Zeman's defeat and death.

A. D. 1801.—Nissar Khan also, the commandant of the Bala Hissar, released Abdoola Khan, and, following his fortunes, accompanied him to Cashmere, where he received a present of a lakh of rupees (£10,000) for this service. Abdoola Khan being thus reinstated in his government, seized many of the surrounding countries, enlisted soldiers, and sent no taxes to the new Emperor Mahomed Shah.

A. D. 1806.—At length that prince, being established on his throne, despatched an army under Wuzzeer Shere Mahomed Khan to bring Cashmere into subjection. This force was met by the army of Abdoola Khan, which occupied the strongholds guarding the Baramoola pass. Shere Mahomed at first entered into negotiation, and by means of cajolery and bribes, succeeded in passing Mozafferabad, and penetrating as far into the valley as Baramoola, (situated at the gorge of the pass leading into the valley,) without much opposition. The eyes of Abdoola Khan were, however, now opened to the approaching danger, and he gave battle at Baramoola in person. The engagement ended in his defeat, and he was forced

to take refuge in the mountains ; and Shere Mahomed entered the city and assumed the government. Abdoola Khan was, however, tacitly allowed to return and take up his quarters in the city, where he shortly after died. Shere Mahomed then sent for the late Soobahdar's son Attar Mahomed Khan, who was cooped up in the fort of Beyrwa, appointed him Naib, and returned to Kabool, which was still distracted by the rival claims of the descendants of Timoor Shah. During the one year this governor remained at Cashmere, a crore of rupees came to the treasury from the country, owing to the unusual activity of trade and the influx of foreign merchants, &c.

افضل رحمانی سنہ ۱۲۲۱

The ensuing year his successor, Akram Khan, was appointed who, on arrival, was defeated by Attar Mahomed, and his whole army made prisoners ; the latter, however, made a mild use of his victory : he soon after presented each soldier with clothing and sent them back to Afghanistan. After this, Mahomed Shah did not think it advisable to disturb Attar Mahomed in his government, and the latter occupied his leisure in organizing his means of resistance.

A. D. 1807.—He repaired and strengthened the fort of the Koh-i-marán on the Harriparvat and built a strong fort at Mozafferabad, and several ghurries along the same road. His brother Jehandad Khan had also strengthened himself at Peshawar ; he held the fort of Attock, and the family contemplated an organized resistance to the Barukzyies. During this period Kabool was convulsed by the rival claims of the Barukzyie and Suddoozyie factions. At length in the year H. 1227, (A. D. 1812,) Mahomed Shah sent his captive brother Soojah-ul-Moolk to Cashmere, where he was imprisoned in the fort of the Koh-i-maráu.

On the retreat of Shah Zeman from Lahore in the year A. D. 1801, Runjeet Sing had risen rapidly into importance, and had consolidated a nation whose elements he found existing in the Punjab in a disjointed form. He was now in fact (A. D. 1813,) amongst the number of the princes of India, and was even deemed an ally worthy of the British Government. Thinking him a fit co-adjutor, Futteh Shah therefore, feeling himself unequal to the conquest of

Cashmere thus fortified by the Suddoozyie brothers, proceeded to Lahore towards the end of 1812 A. D. and entered into a treaty for a subsidiary force for the invasion of the recusant valley for which it was stipulated, Runjeet Sing was to receive eight lakhs of rupees yearly.

A. D. 1813.—Mokim Chund was accordingly sent in command of a force of 12,000 men; which contingent, acting in concert with that of Futteh Khan, commenced an invasion of the country. Attar Mahomed drew out his forces for battle, but, being deserted by some of his officers, and suspecting treachery in others, he shut himself up in the Shereghurrie whilst his brother held out the Hari Parvat. However the enemy agreed to listen to terms, and, after an interview, Attar Mahomed, with his family and treasure, was allowed to depart peaceably for Peshawar; and thus Futteh Khan gained possession of the country. (A. D. 1813.) After remaining there but little beyond three months, he set out to beseige Attock, in which fort Jehandar Khan, brother of the late governor, still held out against him. At the same time he dismissed his ally Mokim Chund, Runjeet's general, with the first instalment of the stipulated 8 lakhs, and appointed his own brother Azim Khan, Naib of the country.

No sooner however did he approach Attock than Jehandar Khan, who had previously sold the fort to Runjeet Singh, fled and joined the Sikhs, and the Sikh government refused to surrender that important stronghold. Enraged at this breach of good faith on the part of his ally, Futteh Khan now refused to fulfil the other stipulated terms of agreement and declared war. Mokim Chund also on his departure from Cashmere had released Shah Shooja, who accompanied him to Lahore where, he was detained as a prisoner till his escape to the British territory. (A. D. 1814.)

Runjeet Singh on the pretext that the eight lakhs of rupees was an annual tribute, now, at the head of a considerable army, invaded Cashmere in person.

The Sikh army arrived at Rajoorie on the 11th June, 1814, and equipped itself for hill warfare, before attempting to force the passes of the Pir Pinjal. The Rajah of Poonch (Rahoola Khan) had openly joined Azim Khan, the governor of Cashmere; and Ugger Khan

Rajah of Rajoorie, (A. D. 1814,) had every disposition to do likewise, had not his country been already occupied by the enemy. As it was, he beguiled them by false intelligence and treacherous guides, and was thus perhaps more truly serviceable to the Cashmere party, than if he had openly joined them. It was determined that Runjeet Singh in person should lead the principal army by the Poonch road towards Toshee-maidan, whilst a diversion should be made by Barumgulla. This last, under Ram Dyal, gained the post at Barumgulla, but it was not till the middle of July that a general advance was made.

On the 13th of that month, however, Runjeet marched from Poonch, and reached Toshee-maidan on the 18th, where he found Mahomed Azim Khan and the Cashmere army, ready to receive him; and his hesitation in attacking on this occasion led to the disasters which followed. Meantime, Ram Dyal, having forced the Pir Pinjal, and defeated the Cashmere force which attacked him at Heerpore, advanced to Shupeyon; the first town in the valley, but was there surrounded, and only allowed to retire through the friendship of Azim Khan for Mokim Chund, the grandfather of that chief.

Runjeet Singh's army at the same time, being discouraged by the delay in attacking the enemy, had lost ground, and eventually been forced into a precipitate retreat to Poonch, with the loss of its baggage; Runjeet Singh quitted the camp and hurried to Lahore. The victorious Azim Khan now resumed the quiet discharge of his duties as Naib of the province, and, having suspicions that the Dewan Hurdoss had invited Runjeet Singh to invade the country, he put him to death. Runjeet Singh, however, seems to have been merely instigated by the wish of extorting the annual tribute of eight lakhs of rupees; which, after the first payment made to Mokim Chund, had been withheld by Azim Khan. The year following this unsuccessful invasion a severe famine occurred in Cashmere, and many perished. There was also a very severe winter: the lakes and rivers being all frozen over.

A. D. 1814.—The governor Azim Khan began now to oppress the Hindus, whom he suspected of a disposition favourable to the Sikhs. At length, after being in power six years, during which pe-

rior he had amassed two crores of rupees (£2,000,000) extorted from the unhappy country ; he left his brother (A. D. 1818,) Jubbar Khan as Naib and proceeded to Kabool, to the assistance of his eldest brother Futteh Khan, at that time a prisoner in the hands of the Sud-dozies. He was, however, too late to prevent that high-spirited chieftain from being foully assassinated in the presence of (and by order of) the Shah. It does not fall to our province to trace the future career of Azim Khan : He subsequently became ruler of Kabool, when, misunderstandings occurring betwixt himself and Dost Mahomed Khan his younger brother, whose force of character he appears never to have fully recognized, he allowed, by his own indecision of character, the golden moments of opportunity to pass, and died of a broken heart 1823 A. D.

Jubbar Khan being left as Naib of Cashmere, (A. D. 1818,) evinced every disposition to govern well, and carried on his government with mercy and equity for the space of six months. After his unsuccessful invasion of Cashmere in the year 1814 A. D., Runjeet Singh had occupied himself in repairing the losses sustained by his arms, in punishing the hill Rajahs, and other allies of Azim Khan this side the Pir Pinjal, to whom he mainly attributed his repulse. At length in the spring of 1819 A. D., encouraged by his recent success against Mooltan, and instigated by Dewan Misr Chund and other advisers, he collected an army as numerous "as ants and locusts," (lit.) and invaded Cashmere a second time. Taught by former reverses, Runjeet Singh now adopted every precaution to ensure success ; he divided his army into three divisions ; the "advance" under Misr Dewan Chund ; the "support" under Prince Khurruk Singh ; and the "reserve" under Runjeet himself. By the month of June 1819, the Dewan had occupied Rajoorie, Poonch, and all the hills this side of the Pir Pinjal ; and on the 23rd by a simultaneous attack carried the positions of the Rajahs of those two states, who covered the passes : (A. D. 1819). At the same time Khurruk Singh's support occupied Poonch and Rajoorie. Meantime, the Cashmere governor Jubbar Khan, made some show of resistance ; he advanced in person as far as Heerpore, and sent forward troops to close the pass ; but his arrangements for defence were ill-concerted, as he allowed Dewan Misr Chund to turn his

position by a flank march, and to take up a favourable position in his rear at Deopore. There, however, he engaged the enemy with 5,000 men on the 5th July, but was wounded and defeated after a feeble action, and fled, with his Pathans, by the Baramoola pass towards the Indus. By this time, Runjeet Singh, with the reserve, had reached Rajoorie; but did not proceed to view his conquest, of which, indeed, he appears to have entertained a superstitious dread, and never visited in person. Dewan Misr Chund therefore advanced and occupied the city and country, which thus, after the lapse of nearly five centuries, again fell under the sway of a Hindu sovereign.

A. D. 1819.—The date is contained in the following Sikh War cry, the letters of which correspond to the Hindu year 1876 of the era of Vikramaditya.

بولوچي واہ گروجي کا خالصا بولوچي واہ گروجي کي فتح

PART 5.—*Cashmere under the Sikhs.*

The Sikh army under Dewan Misr Chund, having thus occupied Cashmere, Motee Ram (son of the late Dewan Mokim Chund) was appointed governor of the valley by Runjeet Singh. The surrounding countries, however, still remained in a disturbed state; several chiefs rebelled along the frontier; amongst others, Shere Zeman Khan of Gundgurrh, (A. D. 1820,) against whom a force was sent, under Ram Dyal the governor's son, who was killed in action.

Ugger Khan also, the rebellious Rajah of Rajoorie, was in May, seized by Golaub Singh, who for this service obtained the Jageer of Jummo. In June the troops were relieved, and Hurrie Singh Nalooa succeeded Motee Ram as governor of Cashmere. At this time a certain Golaum Allie Kukka raised a force, and created some disturbance in the hills about Bombah; but was seized and imprisoned by Hurrie Singh, who, after governing the country two years, was relieved by Motee Ram (A. D. 1822,) for the second time. The latter however only remained one year when Goormuck Singh was appointed governor, his *peshkára* being Chuui Lall. (A. D. 1823). After two years, he also was relieved by Dewan Keerpa Ram (son of Motee Ram); in whose time the great earthquake occurred, which laid every house in the city low;

during the three months of its continuance, the shocks at first were not less than 100 per diem, after which they gradually diminished : the inhabitants lived entirely in tents. At this time the Rajah of Mosafferabad revolted, but was defeated and made prisoner by Keerpa Ram. This governor was very fond of display, but was nevertheless a good ruler. At length he excited the jealousy of Rajah Dhian Singh, the minister of Runjeet, who brought about his recall, (A. D. 1830 ;) the order summoning the governor to appear at the Lahore durbar and give an account of his stewardship, took him entirely by surprise ; it arrived during a nocturnal fête, which he was enjoying with his suite at the Lank island, in the city lake, (locally, the dhull,) which he had illuminated for the occasion. This sudden disgrace, arriving thus in the hour of revel, greatly disconcerted the unfortunate Keerpa Ram, who nevertheless obeyed, and proceeded to Lahore, where he was imprisoned for a short time on the plea of embezzling the public money : subsequently his own and his father Motee Ram's estates being confiscated to make good the pretended deficit, he was released, and, soon after, resorted to that refuge of all disgraced Punjab functionaries, a pilgrimage to Hurdwar, where his subsequent poverty was the best argument for his innocence of the peculation attributed to him. He was succeeded (A. D. 1830,) as governor by Bunma Singh, in whose single year of power, disturbances occurred between the Shiahhs and Soonees.

A. D. 1831.—Prince Shere Singh (afterwards Maharajah) now assumed the government of Cashmere, and appointed Bisakur Singh his Dewan, who attended to the affairs of the country, whilst the Prince took his pleasure in field sports, to which he was much addicted. The Prince himself was an easy ruler, but neglected his charge, and allowed his Dewan to extort money on his own account. A great famine also at this time added to the miseries of the people, thousands of whom died, and many fled the country to Hindustan and the Punjab, where their wretched condition attracted the notice of Runjeet, who forthwith despatched Jemadar Kooshial Singh, with Bhae Goormukh Singh, and Sheikh Golaum Mohy-ood-deen, as a sort of committee to collect the revenue, and watch Shere Singh and his Dewan Bisakur Singh. Kooshial Singh (A. D. 1832,) on arrival, assumed the control of the finances from the Dewan, but the Prince

Shere Singh continued in the country as before following his favourite pursuits. Kooshial Singh, fully aware that a cash remittance was the most effectual method of convincing his master, old Runjeet, of his fitness for the commission entrusted to him, presently extorted twenty lakhs of rupees, besides pushmeenah and horses, from the already impoverished country: he was also a cruel man, and put many innocent people to death; happily for the country he departed after six months, and Colonel Meean Singh was selected by the Maharajah, on account of his humane character, as a fit governor for the unhappy valley. That officer, accordingly (A. D. 1833), proceeded towards Cashmere, but, finding that Prince Shere Singh had not yet seen fit to surrender his government, halted at Bara-moola a month. At length, that royal personage leisurely set out on his return to Lahore, after having misruled the country upwards of three years. Meean Singh then assumed the government, (A. D. 1833,) and set himself to work to repair the country, desolated by famine and oppression. He seems in fact to have been a kind and just man, who prevented his soldiers from oppressing the people. He was raised to the rank of general in 1836 A. D. as a mark of acknowledgment of his services.

In the year 1838 A. D. great floods occurred, which forced the people to take to their boats. In the following year A. D. 1839, Runjeet Singh died and was succeeded by Kurruck Singh, who followed his father ten months after. Noo Nihal Singh, Runjeet's grandson, was also killed by the fall of a gateway at Lahore: upon which a state of anarchy ensued amongst the rival Sikh Sirdars, a graphic picture of which has been portrayed by other hands, during all which struggles for power, however, Meeau Singh remained quiet in his government of Cashmere; till at length he fell, in a mutiny of his troops, by the hand of one Jemadar Tellock Singh. (A. D. 1841). This mutiny was occasioned by that usual grievance amongst Asiatic armies, arrears of pay. Tellock Singh, having demanded payment of these arrears for his regiment, and being refused by the governor, immediately, as preconcerted, drew his tulwar, and calling upon Meean Singh to "go aloft" (that being the slang for death amongst the Sikhs) killed him on the spot. Thus perished the well meaning Meean Singh: intemperance and sen-

suality had however by this time gone far to obliterate the humane and just impulses with which he had commenced his career, and, in consequence of his gross appetites, his person had attained a most unwieldy and unseemly bulk. His son Sunt Singh escaped for the present to the fort of the Harrie Parwat, and thus saved his life ; but he was delivered up and imprisoned by Tellock Singh, who forthwith sacked the treasury and put himself at the head of the rebellion. Meantime, Golaum Mohy-ood-deen (a Mahomedan) had been despatched as governor to relieve Meean Singh, by the new Maharajah Shere Singh of Lahore, but on arriving at Shupeyon (A. D. 1841,) in progress to join, finding that the Shere Ghurrie was in possession of the rebels, he halted, and wrote for assistance. Rajah Golab Singh of Jummoo, and other Sirdars, were now despatched to put down the mutineers ; which they succeeded in effecting after several desperate engagements, in which the rebels were nearly all slain.

A. D. 1842.—Golaum Mohy-ood-deen was now installed as governor of Cashmere, under the sounding title of Nizam-ul-moolk-Etamaad-ood-dowlah. A comet appeared in this last year of the 18th century of Vikramaditya. To the superstition of Asiatics, these “wandering light stars” ever appear ominous of war and evil to the mighty of the land ; and the events of the next six years well nigh justified the predictions of the Punjab astrologers in the present instance.

During the summer of this year, (A. D. 1842,) Golab Singh remained a month, engaged in collecting and forwarding supplies to his troops, employed at this time under the famous Zorawar Singh, in reducing Thibet, to whose trade in Shawl-wool, &c. this merchant Prince had early set his eye. Soon after this, Golaum Mohy-ood-deen sent an expedition to Gilgit, which was, however, defeated with loss. Encouraged by this success, the Rajahs of Mosafferabad, Kurnah, and Kotyhar, had combined their forces, and pressed the governor so hard that he was fain to apply for assistance from Lahore. Upon this his son Sheikh Emám-ood-deen (who received the title of Ameer-ul-moolk Jung Bahadur) was despatched by Maharajah Heera Singh, who had succeeded to the guddie, with an army of 15,000 men to his assistance. On the

approach of this overwhelming reinforcement, the rebels dispersed ; and the Sheikh went to pay his respects to his father, (A. D. 1843,) who raised him to be his associate in the government. In the time of Mohy-ood-deen, the cholera created great havoc among the inhabitants, no less than 23,000 of whom are said to have died in the city alone.

At length Golaum Mohy-ood-deen, being in an infirm state of health, appointed his son (A. D. 1845,) Sheikh Emám-ood-deen governor of Cashmere, and proceeded towards Lahore to pay his respects at court. He was, however, taken ill on the road, returned to Cashmere, and there died (A. D. 1845,) after ruling the country five years.

Now comes the Sikh Campaign of the Sutlej, and the establishment of Dhullip Singh on the throne of Lahore, with Lall Singh as minister ; Cashmere being made over to Golab Singh "for a consideration." On the approach, however, (A. D. 1846,) of Golab Singh's general to take possession, the governor Sheikh Emám-ood-deen, acting under secret instructions from the Lahore durbar, refused to surrender his trust, and succeeded in beating back Golab Singh's troops ; and even advanced 3,000 men, with two guns, under Rajah Fuqueeroola Khan of Rajoorie, in pursuit. He was however induced to surrender, and Maharajah Golab Singh of Jummoo became independent ruler of Cashmere and the hills.

*Notes on the Topography of Murree, by Dr. A. GORDON, H. M.
10th Foot.*

Geographical Position.—The new sanatorium of Murree is situated on a mountain ridge in the Hazarah country; its precise geographical position being 34° N. Latitude, $73^{\circ} 2'$ East Longitude,—and its altitude above the level of the ocean variously estimated at 7,500 to 8,000 feet.

Aspect of the Station.—The general appearance of the station is rendered striking, not so much by the grandeur of its scenery as from the manner in which the residents' houses are dotted about irregularly on the various prominences and acclivities, some half hid in the dense forest vegetation which clothes the more sheltered places, and others exposed on bare projecting rocks.

General position of Barracks and Hospital.—The barracks and hospital occupy the summit of the ridge, whose general direction is as near as may be N. and S. The private houses are built at various elevations on its western face, the bazaar and natives' huts being on the eastern. From the highest point, where it is proposed to erect an observatory, a very extensive view may, in tolerably clear weather, be obtained. To the East and N. East the Cashmere hills may be seen. Those of Cabul and Affghanistan can be traced more to the westward. To the South, the Indus, although at a distance of 80 miles in a direct line, is distinctly visible, and in the East the river Jhelum. The station of Rawul Pindee also may readily be distinguished.

Character of Mountains.—The general appearance of the numerous precipitous mountain masses that rise in wild confusion at and around Murree, presents unequivocal traces of the action of those disturbing forces which are still in active operation in that portion of Asia comprised between Cutch, Herat, Cabul and Affghanistan.

Terraced faces of Hills.—That they have been elevated by successive heaves from below, occurring at intervals of various and uncertain length appears to be clearly indicated by the terraced

Fig. 1.



faces of each, as is endeavoured to be shown in the accompanying sketch, in which the individual terraces are indicated as being of various height and breadth as they occur, and it may be noted that the few patches of cultivation, being on these terraces at the lower part of each hill, give them a very distinct

and unequivocal appearance.

Valleys.—Intersecting these abrupt hills occur deep valleys in which streams of clear calcareous water run with more or less rapidity over rocky beds; bringing with them boulders and irregular fragments of stone of all sizes. The valleys do not appear however to run in any definite direction but wind about irregularly, giving to each rocky ridge an isolated appearance as if totally unconnected with those immediately adjoining—and in addition to the principal line of valley, each individual slope is grooved as it were by the waste of the softer rocks by the elements; the dells thus produced being of very variable depth and precipitancy, but almost all clothed with dense brushwood and tall magnificent forest trees interspersed.

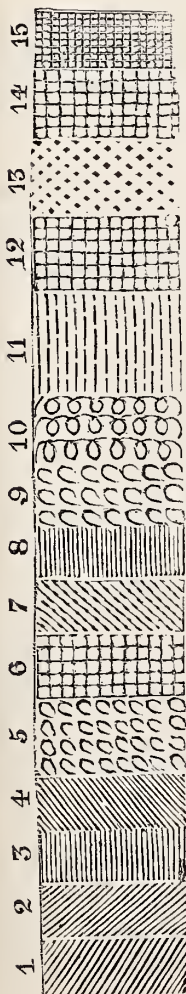
Soil.—The soil is not deep, but rich and prolific in the extreme: it consists of red alluvial loam intermixed with micaceous sand and containing in some places calcareous nodules as of marl both green and grey, and of kunkur.

Geological Age of Rocks.—The rocks constituting these hills belong to a modern period; the oldest being apparently of a date not earlier than the Eocene, but the greater portion evidently diluvial and alluvial deposits. These may, for the sake of convenience of description, be divided into two classes,—namely, the sandstone, and the calcareous.

1. *Sandstone rocks.*—The sandstone rocks constitute the ridge upon which Murree station is built, and includes a variety of substances of greater or less consistence throughout all stages from soft argillaceous mud to hard grey micaceous sandstone fit for building purposes.

Section made by a new road.—A new road, which, for the convenience of horse and foot passengers, is being cut along the face of the hill, reveals each individual stratum; and the following diagram, taken during a walk along it, will show the succession of these in a distance of half a mile.

Fig. 2.



Section 1. Blue sandstone.

2 and 3. Red clayey sandstone with green marl, the strata having different dips.

4. Red clayey sandstone without green marl.

5. Boulders of grey sandstone with stalactites in their interspaces.

6. Red argillaceous mould.

7. Grey sandstone with nodules of oxide of iron.

8. Ditto ditto without iron.

9. Boulders of grey sandstone.

10. Ditto of red sandstone with organic remains (shells).

11. Reddish sandstone containing streaks of carbonate of lime.

12. Argillaceous soil on red nodulated ferruginous rock of various consistence, with a few nodules of green marl and kunkur.

13. Brecciated clayey ferruginous stone with organic remains.

14. Red argillaceous loam.

15. Grey ditto ditto on soft grey sandstone.

Remarks on Section.—The above diagram is intended to represent the succession of vertical strata exposed during the formation of the narrow road to which allusion has just been made; the lower extremity (at 1,) representing the northern end of the road and the upper end (at 15,) the southern—the whole space therein comprised including one of those

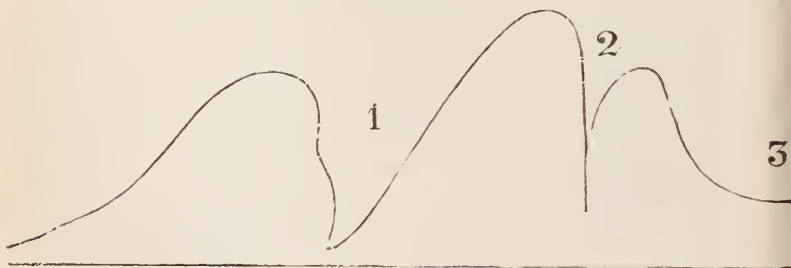
minor gorges on the mountain side that have already been described, around the upper portion of which the road winds.

In those cases where the dip of strata has been various, it has been represented in the sketch, and with reference to the figures, it will be immediately discovered how very great a variety of modern sandstone and argillaceous deposits is displayed in this short section.

Smaller ravines how formed.—As might be expected, the smaller ravines are formed in the softer substances, such as Nos. 6, 12, 14, and 15; the harder materials noted by the other figures forming promontories on the hill face around which the road at such parts is made to bend.

Serrated appearance of Hills.—It would appear as if different portions of the above line of strata had been subjected to various degrees of elevating force, so that the summit of the hill which they form has an irregular serrated appearance as shown underneath.

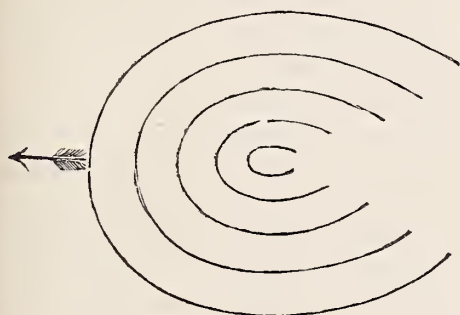
Fig. 3.



Causes which give rise to this.—This may, however, be accounted for by another series of causes, for although the harder strata do in reality appear to have been originally more violently upheaved than the softer materials, it must be borne in mind that the compressibility of the latter would have a considerable influence in modifying the extent to which parts formed of these would become raised. It is also evident that the elements would more readily triturate away valleys in the softer substances than in hard rock such as the grey and ferruginous sandstone, so that the gorges marked in Fig. 3, respectively 1, 2 and 3, correspond with the portions of the section marked 6, 12, 14 and 15, in Fig. 2.

Specimen of sandstone how deposited.—At the point marked 9 in Fig. 2, a very interesting specimen of sandstone occurs, its exposed

Fig. 4.

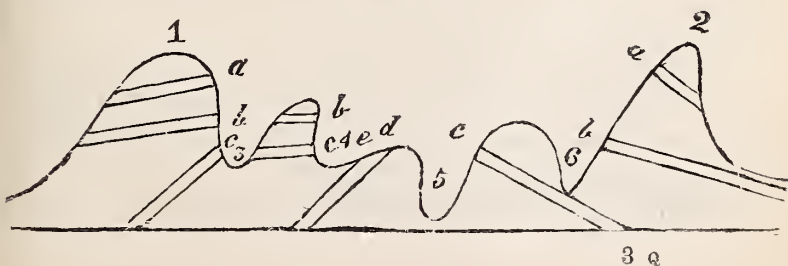


face presenting numerous concentric lines as represented in the margin, showing that the rock was originally deposited in an eddy, but it does not appear that any foreign substance of either animal or vegetable origin

exists in the centre so as to have formed a nucleus.

Continuity of Hills destroyed and how.—On examining the various hills around Murree and carefully noting the outcrop of individual strata on the face of adjoining ones, it becomes evident that their continuity must have been destroyed at a period considerably posterior to their solidification,—and that two distinct forces combined to produce this effect is equally clear. In the first place there are deep fissures running irregularly in the rocks, with individual portions more or less elevated than the general line of rock, showing that the layers were shattered and displaced by forces of a subterraneous nature. Then again, we find terraces with intervening cliffs of a few feet or yards in height with boulders of all sizes, showing marks of greater or less attrition in the bottoms and on the sides of the various intervening valleys—thus evincing the effect of water in a state of motion.

Fig. 5.



Outcrops of Strata.—The above section is intended to represent the appearance of outcrops of strata on the various mountain faces in the vicinity of Murree, and they will be readily recognised as occupying that position which a fracture would exhibit if produced by force from below, tearing asunder the strata as shown at the points marked a and b, and thus producing “a valley of elevation” such as is included between the mountain peaks 1, and 2.

It is almost needless to observe in this place that the strata above represented do not include the whole number that actually exist on the hill faces,—the object aimed at in the sketch being nothing more than to illustrate the theory of their formation now being discussed.

Materials represented in sketch.—The bands noted a and b may be also looked upon as representing the micaceous and clayey ferruginous sandstone which seem to constitute the great mass of the Murree hills, but as has already been stated boulders and more or less perfectly consolidated strata of clayey conglomerate containing nodules of brown iron exist towards the lower portion of these, and such strata may in a theoretic section be represented by that marked c, while the bottoms of the gorges 3, 4, 5 and 6, would be framed more or less thickly with débris of such materials,—and accordingly this is in reality found to be the case, the fragments of stone found there consisting of the same materials confusedly blended together—that constitute the substance of the neighbouring hills.

2. *Calcareous rocks, position and presumed age.*—Calcareous rocks appear to prevail to a considerable extent in the hills around Murree, although only to a small extent in that on which the station has been established. In Fig. 5, the low round hill marked d is almost entirely comprised of this formation, the underlying rock consisting of impure limestone, apparently of the Eocene period,—covered with superimposed layers of fibrous gypsum which occur in definite lines as represented by that marked e, and lying more or less conformably upon the deeper material.

In some parts, the gypsum is tinged of a rose colour, but generally speaking it is transparent and colourless. The dip of its strata is 30° or 35° from West or nearly so, to East, the line of strike being as nearly as possible North and South.

In addition to this more perfectly formed gypsum there are at the

same time found considerable quantities in a less perfectly crystallized condition, and of an impure nature, but evincing marks of deposition from igneous solution in the alternating layers of the ashy-like calcareous matter, with intervening streaks of dark clayey substance, which the fractured surface of a specimen presents.

My opportunities for observation having been very limited, it was not in my power to extend my investigations beyond the immediate vicinity of the station; but two points of considerable importance have come to my knowledge with regard to the geology of this range of hills,—namely, that a thermal spring exists within some twelve or fifteen miles of Murree from which it is worthy of inquiry whether any calcareous deposits now take place,—the other point is that a fossil bone of a large animal, supposed to be of one of the gigantic *Pachydermata* of the later Tertiary period has been discovered at about a corresponding distance in an opposite direction.

Meteorology.—No extended observations have as yet been made regarding the meteorology of Murree, as the sanatorium has so lately been established there. It is hoped however that the register taken from the daily observations made at the hospital there for the five months from May to September 1852 inclusive, will, if compared with similar observations made during the same period at Wuzzeerabad, show the contrast between the temperature at that place, and in the plains of upper India, while a similar register being inserted of the range of the thermometer in the united kingdom will, it is hoped, render the comparison still more extended and complete. The latter however must refer to Dublin in 1844, as no observations for any other place or time are at present available.

Day of Month.	May.				June.				July.				August.				September.			
	Wuzzeerabad. 1852.		Dublin. 1844.		Wuzzeerabad. 1852.		Dublin. 1844.		Wuzzeerabad. 1852.		Dublin. 1844.		Wuzzeerabad. 1852.		Dublin. 1844.		Wuzzeerabad. 1852.		Dublin. 1844.	
	Murree. 1852.				Murree. 1852.				Murree. 1852.				Murree. 1852.				Murree. 1852.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Min.	Max.
1	63.54	94	70	65	45	62.58	84	80	60	44	72.62	100	87	66	49	64.62	84	81	62	48
2	61.56	98	72	66	46	68.62	96	72	63	46	76.64	92	85	38	47	66.64	85	78	67	49
3	68.57	104	78	67	50	68.66	92	81	60	51	74.68	101	84	66	49	68.64	87	78	70	56
4	70.60	106	80	68	56	63.62	102	72	63	52	74.69	94	86	68	52	66.62	90	82	68	48
5	70.62	107	81	63	44	70.66	106	78	68	55	68.62	100	84	63	53	68.64	91	83	66	46
6	70.64	109	85	67	45	74.68	106	82	69	54	68.62	100	84	63	52	68.66	91	83	61	55
7	70.62	108	84	67	44	74.66	106	82	68	55	70.64	103	82	56	44	68.64	97	82	62	58
8	72.62	108	82	64	43	75.66	104	84	63	55	72.66	100	83	68	55	66.64	83	81	66	52
9	74.64	112	83	64	46	74.68	106	86	69	53	74.68	102	84	68	54	68.64	93	81	66	52
10	75.68	101	87	61	42	76.70	106	87	63	47	74.66	104	85	68	53	68.64	89	83	65	51
11	66.65	107	85	61	41	76.68	107	89	69	50	76.68	106	90	67	54	68.62	91	84	65	52
12	60.59	99	81	64	47	78.68	107	91	70	51	78.70	107	90	67	53	70.66	85	83	65	55
13	56.54	100	85	71	50	76.72	109	92	71	55	79.70	103	92	67	53	70.68	96	81	64	54
14	66.54	100	82	68	57	79.65	104	86	68	51	72.68	100	84	63	54	68.66	90	83	66	52
15	68.56	98	71	68	43	72.66	103	91	69	48	72.68	101	87	58	52	68.64	95	82	65	53
16	68.66	106	81	65	43	72.66	104	86	67	45	72.68	98	89	69	48	70.66	97	81	63	43
17	69.62	103	80	57	44	68.66	97	83	64	50	70.68	102	89	71	47	70.66	95	82	68	53
18	66.58	89	81	56	32	72.63	104	86	58	52	71.66	101	88	62	49	66.62	90	82	65	42
19	58.54	89	73	55	39	76.68	108	88	60	45	74.68	104	88	61	48	64.61	96	87	66	44
20	54.49	86	71	53	48	78.68	106	91	67	52	72.70	99	88	62	47	68.62	97	86	70	56
21	52.49	75	67	63	46	78.68	105	92	70	58	72.68	97	81	70	56	68.62	97	86	65	46
22	56.48	83	66	65	50	72.66	106	95	68	56	72.66	102	92	81	57	66.62	94	81	60	48
23	59.52	87	72	69	48	70.66	94	83	70	57	71.70	103	92	81	57	66.62	94	81	60	48
24	49.46	88	75	70	50	72.66	95	84	69	56	70.66	84	93	81	61	68.64	96	84	62	52
25	52.48	86	69	68	55	74.68	102	89	71	53	66.64	99	82	76	54	68.64	91	87	67	50
26	52.48	82	71	64	47	76.68	100	86	73	57	67.66	90	83	68	56	68.64	97	12	65	53
27	52.48	82	68	60	42	73.66	99	88	60	53	68.64	81	81	73	54	69.68	94	82	60	48
28	58.51	92	69	63	43	66.62	98	79	67	47	68.62	85	82	74	60	68.64	94	82	66	45
29	63.54	100	77	64	44	70.62	98	83	70	50	68.64	89	82	69	51	66.64	92	84	66	50
30	66.56	101	77	65	44	72.64	93	83	70	50	68.64	87	84	71	55	66.64	93	81	68	48
31	66.60	101	72	60	41	0	0	0	0	0	65.64	82	81	67	53	66.64	95	84	76	48

Approximation of temperature to that of Dublin.—A bare register of the state of the thermometer gives but a very imperfect idea of the meteorological condition of any locality, and it is to be regretted that observations on more extended scales are not regularly taken at Murree. From the preceding table, however, not only may the temperature of this sanatorium be contrasted with that of a considerable military station in the plains of upper India, but a comparison may readily be established between it and that of one of the most important cities of the united kingdom,—such comparison will show, that during five months of the year at least, the difference in temperature indicated by the thermometer (in the shade) is but a mere trifle between Dublin and Murree.

Note on the present state of the Excavations at Sárnáth.—By
E. THOMAS, *Esq.*, C. S.

On Major Kittoe's departure from Benares in January, 1853, I undertook, during my brief stay at that station, to continue his Archæological operations, so far as they related to the laying open of the inhumed remains of the old Buddhist Monastery at Sárnáth.

At the moment of engaging in this mere mechanical occupation, I trusted that Major Kittoe would, himself, be able to give to the world his own conclusions as to the date and associations of his interesting discovery. I abstained therefore, from even making myself his scholar, preferring alike to form an independent opinion which might follow the developments of the progressive explorations, and still more definitively desiring to avoid any possible appropriation of his varied antiquarian lore; I was, I felt, placed in a delicate position, I came to the work as a simple amateur, he had been professionally entertained as the Government "Archæological Enquirer."

Such members of our Society, as were then present in Calcutta, will call to mind that shortly after this, on his way homeward, Major Kittoe delivered a lecture on Sárnáth, at one of the Society's monthly meetings. No résumé of this discourse has as yet been embodied in *our* transactions—and otherwise I fear that of the

extensive collection of relics and ancient objects—of the varied accumulation of drawings, facsimiles and transcripts of antiquarian remains, made with such accurate nicety, by that devoted admirer of things of olden time—but little is now left that is readily susceptible of publication.

I should not now have ventured into the pages of the Journal Asiatic Society of Bengal as the unprepared exponent of immature theories or the mere chronicler of certain lines of old walls, uncovered in continuation of previous operations, had it not been, that on my departure from Benares, feeling myself bound to submit to the late Mr. Thomason a report of the progress, such as it was, that had been made in an undertaking he had expressed a lively interest in, and which had been carried on not only under the auspices, but with the direct aid of Government, I forwarded to his honor, as the result of my temporary superintendence, my original sketch plan of the excavations, corrected and added to, as it had been, from time to time as new walls or chambers were unearthed. This rough outline was accompanied by a private note alluding to the limited discoveries made, and suggesting the most favourable direction for future exploration, should opportunity offer for continuing operations. In short, I submitted a mere working plan of the present state of the diggings, with brief explanatory MS. references. Mr. Thomason did me the honor to place these imperfect documents on Official record, and at the same time expressed a wish, that a notice on the subject should be published in this Journal.

It is in fulfilment of that desire, that I now, at the eleventh hour, under the pressure of heavy public duties—forward this sketch. The ground plan of the inner square of the Monastery is sufficiently illustrated in the accompanying lithograph, an imperfect idea of the elevation may be gathered by observing the depth of the various walls noted on the plan—but the general profile of the inhumed edifice and the covering débris require momentary notice.

The excavations already completed, viewed with reference to the substances of which the covering bodies were severally composed—tends to show that previous to the erection of the comparatively modern building (colored *lake* in the lithograph) with which we are more immediately concerned—and without at present adverting to

East

West



Scale 12 feet to an inch

the lower walls (distinguished by *neutral tint*), the general line of the original bank sloped from east to west and that the later monastery was erected on the slope of the shelving bank forming the westward face of the *Khérah* or natural mound, to the extreme eastward of which is situated the celebrated *Tope*, which dates from a far earlier period.*

The outline profile therefore of that portion of the accumulations, which served to fill in the higher but unequal line of the broken walls now exposed, formed, by subsequent deposits, a mere continuation to the westward of that face of the original bank, taking however a more gradual slope than the sides of the clean earth mound appear to have done.

In brief summary of the nature of the materials removed during the progress of the excavations, I may note unmixed earthen soil

* Major Cunningham in reply to my enquiries regarding his extensive Sárnáth researches of older days, sends me the following items of information :

‘When I got your letter I could not lay my hands upon my Sárnáth papers, and when I did find them, there did not appear to be any thing that would be of use to you. I opened the great *Tope* in January, 1835 : and made numerous excavations all round it. I cleared out the remains of the *Tope*, in which Jagat Singh, the Dewán of Cheit Singh, had found the relics—and I drove a shaft down the centre of the large brick *Tope* called Chokaudi. I found about one hundred statues and bas reliefs, of which all that were worth preserving were presented by me to the Asiatic Society of Bengal.

‘Connected with Sárnáth there are two great facts which should be brought prominently forward. The first is the size of the building, which Wilford has stated to be 50 feet high, and which Wilson and others have repeated—whereas it is 110 feet high above the ruins, and about 130 feet above the plain, I measured it with a theodolite, 109 feet 10 inches, and afterwards with an iron chain, when I had finished the scaffolding, 110 feet.

‘The other point regarding Sárnáth is its age, and here again Wilford has misled every one. The inscription which he published was found by *Jagat Singh*, and removed to the tank at *Jagatganj*, where Kittoe afterwards found it. This inscription is on the pedestal of a statue and bears reference only to the erection and dedication of the statue in the tenth century, and has no connexion whatever with any of the *Topes*. The great *Tope*, to judge by the alphabetical characters of the inscribed slab which I found inside it must date as early as A. D. 600—700—and I feel certain that it is the very lofty *Tope* seen by Hwan Thsang in A. D. 640 in the Deer Park. As *Sárang* is a Deer, perhaps Sárnáth may be only a contraction of Sáranganáth.’

at the line indicated by the letters *N. W.* at the S. East corner of the clearings. The modern half-wall, erected upon the remains of the more ancient edifice, was evidently built into an already existing bank consisting, at the point of contact, of a *débris* of broken bricks, &c.

The masonry of this wall is regular on the inner face, forming the one side of the small chamber—but is left rough and irregular on the surface covered by the bank—the chambers on the eastern side of the square were found filled in with a strange medley of uncooked food, hastily abandoned on their floors—pottery of every day life, nodes of brass produced apparently by the melting down of the cooking vessels in common use—above these again were the remnants of the charred timbers of the roof—with iron nails still remaining in them—above which again appeared broken bricks mixed with earth and rubbish to the height of the extant wall, some 6 feet from the original flooring—every item here bore evidence of a complete conflagration and so intense seems to have been the heat that in portions of the wall still standing the clay, which formed the substitute for lime in binding the brickwork, is baked to a similar consistency with the bricks themselves. In short, all existing indications lead to a necessary inference that the destruction of the building, by whomsoever caused, was effected by fire applied by the hand of an exterminating adversary, rather than by any ordinary accidental conflagration. Had the latter been the cause of the results now observed, it is scarcely to be supposed that so well-peopled a convent, so time-hallowed a shrine, should have been so hastily and completely abandoned. In front of these chambers we see traces of a verandah, and, at the N. east corner, we again observe the ancient walls performing the part of foundations for their modern successors; there would seem to have been an outlet from the main square at this point, though as far as the excavations have yet been extended in this direction, it is difficult to say where this passage led to, inasmuch as on the east we encounter a mere retaining wall, supporting a corner of the high bank—and on the north we meet with a singular elbow-shaped superficial continuation of the outer wall of the main building; what this strange angular affair may indicate, or how far it may extend into the bank must for the present be allowed to pass.

The outline of the complete square will however, be seen to have been preserved, as far as the foundations go, to the outside of the doorway-block, and the line is further continued through the thick angular wall, at which point the deep foundations cease. Passing by three ordinary chambers on the northern face, we come to one of the image houses—the entrance is from the inner square—the brick and the stone platform may both be supposed to have formed pedestals of erect statues of Buddha; the retreated wall in the corner, between these platforms, combined with the otherwise apparently isolated position of the second platform chamber adjoining towards the north, would have led to the idea that the wall had been pierced for the purpose of communication between one chamber and the other, but as far as the standing walls admit of a decision on the point, there certainly was no doorway at this spot, whatever means of oral or ocular communication may have existed in the screen at a higher level.

Such portion of the western face of the Monastery as has yet been exposed seems to have consisted of cells. These bear less trace of fire than those on the opposite side of the square, but on the other hand a much smaller proportion of their walls remains standing, seeming as if this side of the building, situated as it was on the more exposed slope of the bank, was less early inhumed; indeed as far as can be seen the S. W. corner has been almost entirely swept away, its surviving portions having been covered in at a much later period by the gradual operation of the manufacture of pottery, &c., whose kilns for the supply of successive generations have been pushed on in this direction to meet the prevailing wind. At this corner we again find traces of the verandah of the court and the centre chamber on the southern aspect brings us to the shrine: all that now remains, is the square, elaborately-corniced block in the centre of the chamber, which formed the *Singhásun* or throne for the seated figure of Buddha. The wall to the rear of the statue has been completely destroyed, but the original opening in front of the *Singhásun* is seen to have been enlarged beyond the breadth of the other doorways, probably to afford a free view of the object of worship without necessitating too near an approach on the part of the ordinary votaries.

I now proceed to notice such objects of interest as have been met with during the operations.

Most prominent among these are the small *chaityas* depicted as figs. 6 and 7. Fig. 6, displays the *chaitya* as deposited in its complete state, its seal inscription of fragile clay encircled by and preserved within the mass of subsequently baked clay, which itself is adapted to a religious form of outline; fig. 7, shows the offering when subjected to the hammer of the curious antiquary and develops to us the clay seals, of which 1, 2 and 3, offer varieties. These examples contribute the only three modifications in the style of writing that I have been able to detect, amid the produce of several hundreds of *chaityas*. I had designed that the engravings should show the precise variations of the form of alphabet and exhibit the style of execution peculiar to each, but I must confess that I cannot pretend to illustrate my theme with such imperfect representations as Calcutta Lithography supplies; indeed, to own the truth, I myself have been obliged to refer in many instances to nearly identical originals in my own possession in order to discover what letters the artist designed to express! As the supposed facsimiles will not admit of my readers forming an opinion of the age of this writing, nor for my illustrating its variations, I shall content myself with remarking that Col. Sykes* assigns the Palæography to *any* period "between the 7th and 10th centuries," an open proposition enough, and one we need not now contest!

The entire number of these diminutive prayer temples seem to have been placed as votive offerings in one and the same position, to the right front of the chief figure of Buddha, on the spot indicated on the plan by a double cross within a circle. Whether however this was the appropriate spot,—so far removed from the statue—for the deposit of the pilgrims offering, or whether, when once dedicated at the shrine itself, the officiating priests considered this site of sufficient proximity for absent worshippers' leavings, may be a question; but the little varying uniformity of the character and execution of the legends contained within the *chaityas* would seem to indicate that they were manufactured *on the premises*, or at all events, that the ruling hierarchy had a beneficial interest in the trade, and pos-

* Athenæum, 5th February, 1853.

sibly went so far as to make the site above indicated a location for sale and delivery at an opportune pitch of devotional excitement on the part of the confiding votary ! Besides the three varieties of *inclusive chaityas* there were found specimens of a more primitive form of the same manufacture in which the entire mould of clay seemed to have been prepared at one and the same operation, and after the external outline had been received. The impression was made by forcing the engraved seal into the soft clay from the base of the *chaitya* : in this case the inscription remained comparatively unprotected, but the manipulative process was more simple and possibly more assuring to the mass, who were then enabled to see the writing that was to aid their act of worship.

The inscription itself conveys the sacred formula of the Buddhists : the Indian specimens of the legend are usually faulty in their orthography. I annex a literal transcript of the favourite version at Sárnáth, merely giving Professor Wilson's authoritative declaration of its meaning, and referring the reader to the Journal of the Asiatic Society of Bengal, Vol. IV. p. 132 and p. 51, *Ariana Antiqua*.*

The flat clay cake No. 4, afforded the purchaser an opportunity of making at a single offering a display of twenty figured chaityas and possibly in this strange religion, where water wheels now say prayers for a village community, the one expressed formula may have been supposed in its association to have twenty vehicles for its enunciation !

Figure 5 offers a more humble variety of the same species of impression, having five *chaityas* only and no inscription.

These last were found promiscuously mingled with the débris in the open court, generally at the level of the original surface, showing that their date is not later than that of the destruction of the building itself.

The Lithographed plan indicates the various places where food was

* Sanskrit version.

ये धर्महेतु प्रभ
वा हेतु तेषा तथा गतो
द्य वदतेषा च येनि
रोध एवं वादी मद्वा

अमणः

3 R 2

Wilson's Translation.

The Tathágata (Buddha) has declared the causes which are the origin of moral merit : what is its obstruction also the great ascetic has explained !

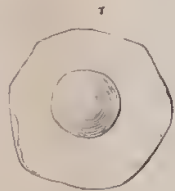
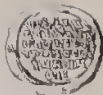
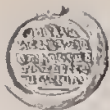
discovered, and I believe Major Kittoe met with the remains of ready-made wheaten cakes in the small recess in the chamber towards the N. E. angle of the square. I can myself assert that on the floor of the cell marked 3, ⊕, a large quantity of rice was found, together with portions of wheat and other grain, part of which was spread out, or possibly scattered at the moment of the destructive inroad that was brought to a climax in the conflagration of the monastery.

A native axe of the form in ordinary use to this day was discovered, imbedded in the verandah foundation at 4, ⊕.

In the cells to the eastward were found, among other things, considerable masses of brass, melted up into nodules and irregular lumps as chance gave them a receptacle amid the general ruin. Here also were seen, broken or whole, the pottery vessels of every day requirement, and the iron nails which connected the cross rafters, still fixed in the larger beams that had escaped complete combustion. Among other bits of iron-work, there remained a well-fashioned ring-bolt that might pass muster at the present day; of matters of domestic utility, I must not omit to mention a clay *chirágh* or lamp of the pointed wick-holder description, which, though it has retained its position in that form in other parts of India, is now superseded in local use by the ordinary small circular sancers of baked clay.

The whole of the somewhat miscellaneous Sárnáth collection as yet unearthed has been deposited in the Benares College.

It remains for me to advert to the plans Nos. 2 and 3. The lithograph No. 3, is an outline section of that portion of the raised mound, situated some hundred yards to the N. W. of the monastery, on which the relic tope was placed: this it will be seen was a circular building of massive strength erected in far more modern days than the large tope previously adverted to, the relics were discovered and removed, many years ago, by some of our older residents at Benares. From the inclination of the walls now standing, it is clear that the dome was not designed to follow the ordinary outline, and that if finished at all, it must have been a flat unsightly object as compared with the lofty proportions of the earlier edifice. Major Kittoe was under the impression that the visible portion of the



wall formed only the upper curve of a building of considerable elevation that had been covered in process of time, and he further trusted that deep digging would reward the explorer with new relics, as in the case of the Manikyala tope. In consequence of this I sunk my excavation till I came to the absolute base of the foundation.

The notes on the plan appear to explain all that need be said about the rest of the undertaking, but I may mention that I should be disposed to assign a considerably more modern date to the platform pedestals of the statues of Buddha, than to the monastery itself.



Examination and Analyses of Dr. CAMPBELL's Specimens of Copper ores obtained in the neighbourhood of Darjeeling.—By HENRY PIDDINGTON, Curator Museum of Economic Geology.

Dr. Campbell, at my request, has been good enough to send us down large despatches of twelve seers each of these ores as found, so as to enable us both to judge accurately of the nature of the rock in which they occur and to *sample* them fairly. By sampling is meant, amongst metallurgists and smelters, the taking of fair average samples from a heap of ore, so as to obtain fair results in the reduction or analysis. It is a circumstance which leads to much deception that those who forward specimens only send choice ones, and the assayers again too often neglect this process of careful sampling which is a tedious one and requires judgment and great care.

I.—*Pushak Ore.*

This ore, as sent, may be described as a tough, generally fine-grained, and slightly contorted hornblende slate; passing into a massive hornblende rock; the copper and iron pyrites being dispersed through it, or sometimes in laminae, like the mica in gneiss. Generally the whole may be called a pyritous hornblende slate.

There are also a few specimens of copper and iron pyrites in a hard quartzose micaceous rock intersected by thicker laminae of hornblende. This rock I should, call a tough, pyritous, hornblendic mica slate.

There are also a few specimens of contorted mica schist with a little pyrites.

A careful sample of all these ores gave in 1,000 grains.

	Grains.	
Earthy Silicates,	856.00	
Per. Ox. Iron,	113.00	
Bismuth,	7.00	
Protox. Copper,	17.12	Copper.
		13.57
	<hr/>	
	993.12	
Loss (principally Sulphur),	6.88	
	<hr/>	
	1000.00	
	<hr/>	

Hence the pyrites are found be principally iron pyrites with but a small per centage (of $1\frac{3}{4}$ per cent.) of copper.

It will be observed that my analysis is one of the whole rock. No doubt far better results would be obtained by pounding and washing, but this would be a very expensive process with so tough a rock, and require the care of experienced miners, for I found that much of the pyrites had a tendency to "*wash off*," as it called, from the extreme fineness to which the scales of it are reduced in the mortar and exist in their natural state.

Altogether then, unless richer ores are found, this is not one worth working; but it may be well worth sinking a shaft (common native well-sinkers will go to a good depth in a dry soil) to see what lies below. No surface indication, rich or poor, should be taken as an index to what a mineral scite really is.

II.—*Mungwah Ores.*

This ore is mostly, or rather wholly, Actinolite rock, white, grey and yellow brown. The dark grey specimens approach to a micaceous hornblende rock and the lighter and white ones are Tremolite; all varieties of hornblende. The rock contains every where specks and nests of pyrites, and in some specimens minute nests of magnetic iron ore. 1,000 grains of this rock, from about a pound of it carefully

sampled, gave nothing but iron, and traces only of copper, just sufficient to colour the ammoniacal solution.

III.—*Punkabarri Ores.*

A compact and tough, massive, and fibrous hornblende rock ; with promising nests of pyrites (as to size) interspersed, but on examination it was found to be exactly the same as the foregoing No. II. affording a mere trace of copper only.

A Monograph of the Indian species of PHYLLOSCOPUS and its immediate affines.—By EDWARD BLYTH.

There is no group of birds more difficult to the student of Indian Ornithology, than the very extensive series of small *Bee-fins*, or “Warblers,” known to the French as *Pouillots*, and in parts of England by the name of *Pettychaps*. It is exemplified in Europe by four well known species;* and as an *avis rarissima* in Europe, the common Indian *Motacilla proregulus*, Pallas (*Regulus modestus*, Gould), which strictly appertains to the series under review, has

* 1. PHYLLOSCOPUS SIBILATRIX ; *Motacilla sibilatrix*, L. : *Sylvia sylvicola*, Latham. Type of SIBILATRIX, Kaup.

2. PH. BONELLI ; *Sylvia Bonelli*, Vieillot : *S. Nattereri*, Temminck.

3. PH. TROCHILUS ; *Motacilla trochilus*, L. : *Sylvia fitis*, Bechstein : also, according to M. Degland, *S. icterina*, Temminck (nec Vieillot) ; *S. flaviventris*, Vieillot ; *S. angusticauda*, Gerbe ; and *S. tamarixis*, Crespigny.

4. PH. RUFUS ; *Curruca rufa*, Brisson : *Sylvia collybita*, Vieillot ; *S. loquax*, Herbert ; and by the older British ornithologists erroneously assigned to *Motacilla hippolais*, L.

In addition to these four, in N. Africa, Dr. Rüppell describes—

PH. UMBROVIRENS ; *Sylvia umbrovirens*, Rüppell (described but not figured in his *Neuen Wirbelthieren*, Vogel, p. 112). From Abyssinia.

PH. BREVICAUDATUS ; *Sylvia brevicaudata*, Rüppell, *Atlas*, t. 35. From Kordofan.

Another that will probably have to be added to the European fauna is

PH. BREVIROSTRIS ; *Sylvia brevirostris*, Strickland, *P. Z. S.* 1836, p. 98. Procured at Smyrna. Differs from PH. RUFUS in its greater size, and from PH. TROCHILUS “in the shortness of the beak, and the dark colour of the legs.”

Lastly, two species are briefly described in Dr. Horsfield's Catalogue of Javanese birds, *Trans. Lin. Soc.* xiii. 156 ; neither of which can we identify with Indian species : viz.

been obtained in Dalmatia and in Britain; while three of the European species have been stated to occur in India, but at a time when the various Indian *Pouillots* were undescribed and the multiplicity of distinct species of them was unsuspected. As neither of them, however, would appear to have been met with in the country since the numerous Indian species have been recognised, we are led to infer that certain other species were mistaken for them; and it is highly probable that the *Sylvia sibilatrix* of Dr. Royle's list* refers to our PH. NITIDUS, and Mr. Gould's *S. trochilus* of W. India† to our PH. VIRIDANUS; and perhaps M. Temminck's *S. trochilus* of Japan may likewise prove to refer to some nearly affined species, which he failed to distinguish from the *trochilus* of Europe.‡

The Indian species have been described under various generic names; and even now it would not appear that systematists are agreed whether to range the accepted typical form, that of *Motacilla trochilus*, L., under PHYLLOPNEUSTE of Meyer (1822), which included also the distinct form of *Mot. hippolais*, L., regarded

PH. JAVANICUS; *Sylvia javanica*, Horsfield: seemingly affined to our PH. MAGNIKOSTRIS. And

PH. MONTANUS; *Sylvia montana*, Horsfield: apparently affined to our PH. TRISTIS. Of PH. MONTANUS, (Horsf.), the late lamented Hugh E. Strickland informed us, that "the wing is 2 in. long, gradated, with the fifth quill longest."

Mr. Strickland adds, from Java,—

PH. TRIVIRGATUS; *Sylvia trivirgata*, Temminck: a species referable to Mr. Hodgson's Group ABERNIS; and it is probable that others of this minor group, from the Archipelago, remain to be described.

* *Ill. Him. Bot. Introd.* p. lxxvii. In this list are enumerated "SYLVIA SIBILATRIX, S. RUFA (plains), S. TROCHILUS, and several species undetermined." It is not probable that either of the names specified is correctly applied; nor certain others in the same list, as especially GALLUS SONNERATII!

† *Proc. Zool. Soc.* 1805, p. 90.

‡ Some Japanese birds which we saw with Mr. Gould, sent by M. Temminck, and identified by him with European species, certainly presented differences more or less marked. We especially remember the Japanese Robin, Jay, and Bullfinch. The last is probably PYRRHULA GRISEIVENTRIS, Lafresnaye, *Rev. Zool. de la Soc. Cuv.* 1841, p. 241.—Since this note was penned, we have seen Mr. Gould's figure of the Japanese Bullfinch, in his 'Birds of Asia,' where it is designated P. ORIENTALIS, Temminck and Schlegel. The Jay, too, is cited by the Prince of Canino as GARRULUS JAPONICUS.

by Mr. G. R. Gray (in 1841) as typical of PHYLLOPNEUSTE,—or in PHYLLOSCOPUS, Boie (1826), of which *M. trochilus* is cited as typical. In M. Deglaud's 'Ornithologie Européenne' (1849), *M. hippolais*, L., with three European congeners is referred to HIPPOLAIS, Brehm (1828), the typical species being termed H. POLYGLOTTA, (Vieillot); and *M. trochilus* and its congeners are assigned to PHYLLOPNEUSTE. An older name than HIPPOLAIS, Brehm, occurs, however, in FICEDULA, Koch (1816), which is adopted by Dr. Rüppell for the *Pouillots*,* and by Dr. Schlegel for both groups;† but it is faulty as implying these birds to be fig-eaters (or *Beccaficos*), whereas all of the series are exclusively insectivorous, and in no way to be confounded with the highly frugivorous Fauvettes.‡

In former papers, we followed Mr. Gray's arrangement, but with this error, that certain Indian species were assigned to PHYLLOPNEUSTE apud Gray (v. HIPPOLAIS, Brehm); whereas upon referring to the characters of this genus, as specified by M. Deglaud, we find that we had misapprehended it, and incline now to suspect that with it should be united the divisions CULICIPETA, nobis, and AERORNIS, Hodgson.

In a series of 22 species actually before us, excluding REGULUS, we observe that one only, the European PHYLLOSCOPUS SIBILATRIX (type of SIBILATRIX, Kaup), is remarkable for the comparative great length of its wings; whereof the first primary is minute and the second is nearly as long as the third. In all the rest, the small first primary is considerably less diminutive, and the second is much shorter than the third: the proportions varying, however, to some extent, and the wing being more or less rounded in different

* *Systematische uebersicht der vogel nord-ost Afrika's* (1845), p. 57.

† *Revue Critique des Oiseaux d'Europe* (1844), pp. xxv, -vi.

‡ The four European species described by M. Degland under HIPPOLAIS are as follow :—

1. H. POLYGLOTTA; *Motacilla hippolais*, L.; *Sylvia polyglotta*, Vieillot: *H. salicaria*, Bonap.

2. H. ICTERINA; *Sylvia icterina*, Vieillot (nec Temminck): *S. hippolais* apud Temminck, *Manuel*, 2nd edit., (1820).

3. H. OLIVETORUM; *Sylvia olivetorum*, Strickland.

4. H. ELAICA; *Salicaria elaica*, Lindermayer: *Ficedula ambigua*, Schlegel.

species; affording a good differential character in several instances. In general, the wings are shorter and more rounded than in the European PH. TROCHILUS: but looking to the *ensemble* of characters, it seems doubtful whether more than three divisions can be retained in the whole series under review. These are PHYLLOSCOPUS, certain species of which (constituting the *Reguloides*, nobis,)* offer a close approximation to REGULUS, and serve to indicate the true systematic position of that genus,—REGULUS (which M. Degland and others have arranged near PARUS),—and CULICIPETA (including ABRORNIS), which should perhaps be merged in PHYLLOPNEUSTE (v. HIPPOLAIS). Under these three groups only, we now comprise the following Indian species.

I.—Genus PHYLLOSCOPUS, Boie, apud G. R. Gray. Type MOTACILLA TROCHILUS, L.†

1. PH. RAMA; *Sylvia rama*, Sykes, *P. Z. S.* 1832, p. 89. There appear to be two races of this bird, differing a little in shade of colour, but in no other particular that we can discern. The bill is rather thicker and the form less slender than in most others of the genus; and together with the colouring, approximate it to CALAMOHERPE, Boie, for a species of which it might be mistaken at first sight;‡ but the form of the wings and tail, and general character, sufficiently indicate its true position to be as here arranged.

* *J. A. S.* XVI, 442.

† A better *average* type exists in PH. RUFUS, v. *Curruca rufa*, Brisson.

‡ We have three Indian species of CALAMOHERPE, all distinct from those of Europe.

1. C. BRUNNESCENS; *Agrobates brunnescens*, Jerdon. Very like the European C. ARUNDINACEUS (*Turdus arundinaceus*, L.; *Sylvia turdoides*, Meyer); but easily distinguished by the form of the wing, in which the second or first developed primary is constantly $\frac{1}{4}$ in. shorter than the next, and the third, fourth, and fifth are subequal.

2. C. DUMETORUM, nobis, *J. A. S.* XVIII, 815.

3. C. AGRICOLA, Jerdon, *Madr. Journ.* XIII, pt. II, p. 131; *J. A. S.* XIV, 595. This much resembles the European C. SALICARIA (*Motacilla salicaria*, Gmelin; *C. alnorum*, Brehm, *Mot. arundinacea*, Lightfoot); but is readily distinguished from it, as is also C. DUMETORUM, by the same difference in the proportion of the primaries as exists in the species before cited.

The three Indian species of CALAMOHERPE accordingly tend to approximate PHYLLOSCOPUS in the form of the wing, and they have also less aquatic habits than their European congeners.

Length 5 in., by $7\frac{1}{2}$ in. in alar expanse: wing $2\frac{3}{8}$ to $2\frac{1}{2}$ in.; 1st primary $\frac{9}{16}$ in., the second $\frac{5}{8}$ in. shorter than the third, which about equals the 4th and 5th: tail $2\frac{1}{8}$ in.; its outermost feather $\frac{1}{8}$ in. shorter: bill to gape $\frac{5}{8}$ in.: tarse $\frac{3}{4}$ in. Irides dark. Bill dusky above, light carneous below: legs light brown, tinged with plumbeous on the joints. Plumage, above uniform light greyish-brown; below pale or albescent, passing to white on the chin, middle of belly and vent: lores, continued as a slight streak passing over the eye, and the orbital feathers, pale.

This bird is very common in Lower Bengal during the cold season, upon sandy soil above the tideway of the rivers; haunting baubul topes and scattered trees near villages, as well as hedges and bush-jungle. Those of S. India have a slight ferruginous tint throughout; but we can detect no further difference. It would not appear to inhabit the sub-Himalayan region.

2. PH. MAGNIROSTRIS, nobis, *J. A. S.* XII, 966: *Phyllopneuste indica*, nobis, *J. A. S.* XIV, 593: *Ph. trochilus*? apud Hodgson, Gray, *Zool. Misc.* 1844, p. 82.

Length 5 to $5\frac{1}{4}$ in., by $8\frac{1}{4}$ in. across: wing $2\frac{5}{8}$ to $2\frac{3}{4}$ in., its first primary measuring $\frac{3}{4}$ in., and the second being $\frac{7}{16}$ in. shorter than the third, which does not quite equal the 4th and 5th: tail 2 to $2\frac{1}{8}$ in., its two outer feathers on each side very slightly graduating: bill to gape $\frac{5}{8}$ in.: tarse $\frac{3}{4}$ in. Irides dusky. Bill dusky plumbeous above, fleshy horn-colour at base of lower mandible. Legs albescent plumbeous. Plumage, duskyish or infuscated olive-green above, having a faint tinge of tawny, especially on the wings and tail; the medial larger coverts of the wings being tipped with albescent-greenish: a narrow but conspicuous pale yellowish supercilium, and the lower ear-coverts are partly of the same hue: under-parts pale; the breast tinged with ashy, mingled with faint yellowish; and the rest of the lower-parts are more or less of a purer yellowish-white. The tawnyish hue of the wings and tail resembles that of the upper-parts of the European PH. RUFUS, whence the name of the latter species.

The species appears to be generally diffused over the country, and we have seen specimens from the eastern coast of the Bay of Bengal, and also one from Chusan. We have been informed that it has a pleasing song.

3. *PH. LUGUBRIS*, nobis, *J. A. S.* XII, 968. Length $4\frac{3}{4}$ to $4\frac{7}{8}$ in., by $7\frac{1}{2}$ in. across: wing $2\frac{1}{2}$ in.; first primary $\frac{3}{4}$ to $\frac{13}{16}$ in., and the 2nd $\frac{5}{16}$ in. shorter than the third, which does not quite equal the 4th and 5th: tail $1\frac{7}{8}$ in., subeven. Bill to gape nearly $\frac{5}{8}$ in. Tarse $\frac{3}{4}$ in. Irides dusky. Bill dusky above, and also on the medial part of the lower mandible; the rest amber-coloured. Legs pale greenish-dusky. Plumage, above dusky olive-green, nearly as in the last species, but without the tawny shade; also a similar pale yellowish supercilium, and tips to the medial wing-coverts: below albescent, faintly tinged with yellow medially, and laterally with the hue of the flanks.

Common in Lower Bengal during the cold season, and more or less so over the country generally.

4. *PH. AFFINIS*; *Motacilla affinis*, Tickell, *J. A. S.* II, 576: *Ph. flaveolus*, nobis, *passim*; *Abrornis xanthogaster*, Hodgson, Gray, *Zool. Misc.* 1844, p. 82. Length $4\frac{3}{8}$ to $4\frac{1}{2}$ in., by $6\frac{1}{2}$ to 7 in. in expanse: wing $2\frac{1}{8}$ to $2\frac{3}{8}$ in.; having the 1st primary $\frac{3}{4}$ in., and the second $\frac{5}{16}$ in. shorter than the third, which almost equals the 4th and 5th: tail $1\frac{3}{4}$ to $1\frac{7}{8}$ in., its outermost and penultimate feathers very slightly graduating: bill to gape $\frac{1}{2}$ in., or a trifle more: tarse $\frac{3}{4}$ in., or nearly so. Irides dark. Bill dusky above, amber-coloured below: legs pale brownish-dusky, tinged with yellow; the soles more or less yellowish. Plumage, above fuscous olive-green, with an extremely faint tawny tinge; no pale tips to the medial wing-coverts: supercilia, cheeks and under parts, pale sullied yellow, brightest on the middle of the belly, with a slight tawny tinge in some, and the breast and flanks a little infuscated.

This species might be supposed to be the young of the preceding, in corresponding yellowish garb to the young of *PH. TROCHILUS* and *PH. RUFUS*; but on minute comparison of freshly killed specimens, they are seen to be distinct. The bill is more feeble, and much more compressed, in *PH. AFFINIS*; whereas in *PH. LUGUBRIS* it is very little compressed, and the rictal setæ are considerably more developed. The colour of the legs is also very different, being in *LUGUBRIS* pale greenish-dusky, while in *AFFINIS* there is a strong tinge of brown. From examination of a great number of specimens, we feel convinced that the colouring here described is permanent.

The species is common in Lower Bengal, more so above the tideway of the rivers, and we believe that it is generally distributed over India.

5. PH. INDICUS; *Sylvia indica*, Jerdon, *Madr. Journ.* XI, 6: *Ph. griseolus*, nobis, *J. A. S.* XVI, 443.

Length $5\frac{1}{4}$ in., by $7\frac{1}{4}$ in.: wing $2\frac{5}{8}$ in.; having the first primary $\frac{7}{8}$ in. long, and the second $\frac{3}{8}$ in. shorter than the third, which equals the sixth, and is scarcely shorter than the fourth and fifth: tail 2 in.: bill to gape $\frac{9}{16}$ in.: tarse $\frac{3}{4}$ in. Irides very dark brown. Bill dusky above, below pale amber: interior of the mouth whitish, with scarcely a tinge of yellow. Tarse externally and the toes above, light brown; internally and beneath, yellow. Plumage, above uniform dull ash-colour, without a tinge of green: supercilia, clear pale yellow: lower-parts pale dull yellowish, purer on the middle of the belly, and the rest more or less tinged with dull tawny.

This species appears to be found chiefly in the peninsula of India, and is rare in Lower Bengal.

6. PH. FUSCATUS, nobis, *J. A. S.* XI, 113: *Ph. brunneus*, nobis, *J. A. S.* XIV, 591, (the young).

Length 5 to $5\frac{1}{4}$ in. by $7\frac{1}{8}$ to $7\frac{3}{8}$ in.: wing $2\frac{1}{4}$ to $2\frac{3}{8}$ in.; having the first primary $\frac{13}{16}$ to $\frac{5}{16}$ in., and the second $\frac{5}{16}$ in. shorter than the third, which equals the 6th and is a little shorter than the 4th and 5th: tail $2\frac{1}{8}$ in., with its outermost feathers $\frac{3}{16}$ in. shorter than the middle ones: bill to gape nearly $\frac{5}{8}$ in.: tarse $\frac{7}{8}$ in. Irides dark hazel. Bill dusky above, yellowish at base of lower mandible; inside of the mouth rather pale yellow: legs greenish-brown. Plumage, above uniform olive-brown; below albescent, purest on the throat and middle of belly, and weakly tinged with a ferruginous or ruddy hue on the pale supercilia, sides of neck, flanks and lower tail-coverts, and more faintly on the breast; axillaries also weak ferruginous, with the fore-part of the under-surface of the wing; and the primaries are slightly margined with pale rufescent: no trace whatever of a wing-band. The young (*Ph. brunneus*, nobis, *passim*,) resemble the adults in colour, but the wings and tail are rather shorter, and the plumage is of somewhat more open texture.

Not rare in Lower Bengal during the cold season; but commoner, it would seem, to the eastward, and especially in Arakan.

7. PH. VIRIDANUS, nobis, *J. A. S.* XII, 967 :* *Abrornis tenuiceps*, Hodgson, Gray, *Zool. Misc.* 1844, p. 83. (Perhaps PH. TROCHILUS of W. India apud Gould).

Length $4\frac{3}{4}$ to $5\frac{1}{8}$ in., by $7\frac{1}{4}$ to $7\frac{1}{2}$ in. : wing $2\frac{1}{4}$ to $2\frac{1}{2}$ in. ; its first primary $\frac{5}{8}$ to $\frac{3}{4}$ in., and the second $\frac{1}{4}$ in. shorter than the third, which equals the fourth and fifth : tail $1\frac{3}{4}$ to 2 in. Bill to gape nearly $\frac{5}{8}$ in. : tarse $\frac{1}{16}$ to $\frac{3}{4}$ in. Irides dusky. Bill dusky horn-colour above, the under mandible yellowish except towards tip. Legs pale greenish-plumbeous. Plumage, above light dull olive-green, beneath greenish-albescent : a pale yellow streak over the eye ; and a slight whitish bar on the wing, formed by the tips of its larger coverts.

The commonest species of the genus in Lower Bengal ; and we believe generally diffused. The only sound we have heard it utter is a faint *tiss-yip* frequently repeated ; but never a number of times in continuous succession, like the much louder *tsih-tseh* of the European PH. RUFUS.

8. PH. NITIDUS, nobis, *J. A. S.* XII, 965 : *Muscicapa nitida* (?), Latham, Franklin : *Sylvia hippolais* apud Jerdon, *Madr. Journ.* XI, 6 ; *Hippolais Swainsoni*, Hodgson, Gray, *Zool. Misc.* 1844, p. 82. (Probably *Sylvia sibilatrix* of Royle's list.)

Length $4\frac{1}{2}$ to $4\frac{3}{4}$ in., by $7\frac{3}{8}$ to $7\frac{1}{2}$ in. across : wing $2\frac{3}{8}$ to $2\frac{5}{8}$ in. ; having the first primary $\frac{9}{16}$ to $\frac{5}{8}$ in., and the second $\frac{3}{8}$ in. shorter than the third, which equals the fourth and exceeds the fifth : tail $1\frac{7}{8}$ to 2 in. : bill to gape $\frac{5}{8}$ in. ; and tarse $\frac{3}{4}$ in. Irides dark. Bill carneous-dusky, the lower mandible pale ; and legs light brownish, tinged with yellow on the toes. Plumage, above of a much livelier green than in any of the preceding, resembling that of the European PH. SIBILATRIX ; below unsullied pale yellowish, brightest about the breast ; and there is a pale wing-band, formed by the tips of the larger coverts of the secondaries.

This pretty species appears to be very generally distributed, but is somewhat rare in Lower Bengal.

9. PH. TRISTIS, nobis, *J. A. S.* XII, 966 : *Sylvia trochilus* apud Jerdon, *Madr. Journ.* XI, 6.

* *Phyllopneuste rufa* apud nos, *J. A. S.* XI, 191 ; and *Ph. affinis*, *Ann. Mag. N. H.* 1843, pt. 2, p.

Length $4\frac{1}{2}$ to 5 in., $6\frac{1}{2}$ to $6\frac{7}{8}$ in. ; of wing $2\frac{1}{8}$ to $2\frac{1}{2}$ in. ; the first primary $\frac{3}{4}$ in. (in large specimens), and the second $\frac{1}{4}$ in. shorter than the third, which equals the fourth and fifth : tail $1\frac{3}{4}$ to 2 in. : bill to gape $\frac{1}{2}$ in. ; and tarse $\frac{9}{16}$ to $\frac{3}{4}$ in. Irides dark. Bill blackish, tinged with yellow at base of lower mandible ; and gape also yellow : legs dull black. Plumage, above uniform dull brown : below albescent, with a faint tinge of ruddy or ferruginous on the pale supercilia, sides of neck, breast and flanks ; and no tinge of yellow except on the axillaries and fore-part of the wing underneath, which are almost pure light yellow. Bill small and slender.

A common species, and generally diffused. We once observed it in great abundance, together with *CALAMOHERPE AGRICOLA*, haunting low bushes near the Calcutta salt-water lake.

10. *PH. OCCIPITALIS* ; *Phyllopneuste occipitalis*, Jerdon, nobis, *J. A. S. XIV*, 593.

Length $4\frac{3}{4}$ in. : of wing $2\frac{5}{8}$ in. ; the first primary $\frac{3}{4}$ in., and the second $\frac{5}{16}$ in. shorter than the third, which nearly or quite equals the fourth and fifth : tail 2 in., even or squared. Bill to gape $\frac{5}{8}$ in. Tarse $\frac{11}{16}$ in. Alar and caudal feathers unusually firm. Bill light dusky above, pale below : legs pale. Plumage, above mingled green and ashy, the latter prevailing on the back, the former on the rump, wings and tail ; crown dusky, with whitish supercilia, and a conspicuous pale medial line, broader and tinged with yellow at the occiput : a slight but distinct yellowish-albescent wing-band ; the fore-part of the wing brightish green ; and its margin, with the axillaries, pure light yellow. Lower-parts albescent, mingled with yellowish, and very faintly tinged with ruddy. Inner webs of the three outer tail feathers on each side narrowly bordered with white, the ante-penultimate less so.

This pretty species we have only seen from the Deyra Doon and from S. India. In colouring, it approximates the groups *Reguloides* and *Abornis* ; but the remarkable firmness of its wings and tail is peculiar, and prohibitive of its association with either.

The next three species (constituting the subgroup *Reguloides*, nobis,) have, like the last, a pale medial streak on the crown, and they greatly approximate the genus *REGULUS* in figure and proportions, and even in colouring (minus the developed crest) ; but their habits are those of other *PHYLLOSCOPI*.

11. PH. TROCHILOIDES; *Acanthiza trochiloides*, Sundevall (1837): *Phyllopneuste reguloides*, nobis, J. A. S. XI, 191, XII, 963 (nec *reguloides* apud Hodgson).

Length of a male $4\frac{7}{8}$ in., by $7\frac{1}{4}$ in.: wing $2\frac{1}{2}$ in.; its first primary $\frac{1\frac{1}{6}}$ in., and the second $\frac{3}{8}$ in. shorter than the third, which equals the fifth and is a little shorter than the fourth; but, in some, these three are equal: tail $1\frac{7}{8}$ in., even. Bill to gape $\frac{5}{8}$ in., or nearly so. Tarse $\frac{1\frac{1}{6}}$ in. Length of a female $4\frac{1}{2}$ by $6\frac{7}{8}$ in.; wing $2\frac{3}{16}$ in.; and tail $1\frac{3}{4}$ in. Irides dark. Upper mandible dusky, the lower yellow; and legs yellowish-brown tinged with plumbeous. Plumage, above dull green, a little infuscated, with two conspicuous yellowish-white bars on the wing, formed by the tips of the greater and lesser coverts: below albescent-greenish, a little tinged with yellow: a broad yellowish-white or pale yellow supercilium; and above this a broad dusky band, leaving the middle line of the crown dull green like the back, but paling at the occiput; below the supercilium the colour is also dusky: axillaries, with the fore-part of the wing underneath, yellow; and the outermost and penultimate tail-feathers have a narrow whitish margin to their inner web.

Inhabits the sub-Himalayas, and visits Lower Bengal in some abundance during the cold season. We have obtained one so late as March 15th in the vicinity of Calcutta.

12. PH. PROREGULUS; *Motacilla proregulus*, Pallas: *Regulus modestus*, Gould; and, in abraded plumage, *R. inornatus*, nobis, J. A. S. XI, 19, and *Ph. montanus*, Hutton, nobis, Catal. No. 1105: *Phyllopneuste nitidus*, Hodgson, G. R. Gray.

Length generally about 4 to $4\frac{1}{4}$ in., by 6 to $6\frac{1}{2}$ in. across: wing $2\frac{1}{8}$ in.; its first primary $\frac{1}{2}$ in.,* and the second not $\frac{5}{16}$ in. shorter than the third, which exceeds the sixth, and nearly or quite (in different specimens) equals the fourth and fifth: tail $1\frac{1}{2}$ to $1\frac{3}{4}$ in., even. An unusually large specimen measured $4\frac{1}{2}$ by 7 in.; wing $2\frac{1}{4}$ in.: tail $1\frac{3}{4}$ in. Bill to gape nearly $\frac{5}{8}$ in.: tarse $\frac{1\frac{1}{6}}$ in. Irides dark, Upper mandible dusky, the lower yellow except at tip; and legs rather pale brown, without any plumbeous tinge. Bill nearly as much compressed as in REGULUS. Plumage, above olive-green, brightest on the rump, wings and tail: crown dusky, with a pale mesial line,

* In one only, of several specimens, $\frac{5}{8}$ in.

sometimes well defined, but in new plumage not very distinct; and in much worn or abraded plumage, it often disappears altogether, and the upper-parts are then dingy greyish-brown, with scarcely a tinge of green: two conspicuous yellowish-white bars on the wing, the hinder more broad; and behind this is a dark patch, corresponding to the black seen in *REGULUS*: tertiaries conspicuously margined with whitish (as more or less in *REGULUS*), and secondaries and some of the primaries slightly tipped with the same: axillaries, with the fore-part of the wing underneath, pale yellow: supercilia and lower-parts greenish-albescent.

Common in Lower Bengal, where a few perhaps breed; but the great majority retire to the mountains for that purpose.* As an exceedingly great rarity, it has been met with in Dalmatia and in England. Habits as in other species of *PHYLLOSCOPUS*, and not (as in *REGULUS*) gregarious: song-note nearly similar to that of *PH. SIBILATRIX*, but considerably weaker.

13. *PH. CHLORONOTUS*; *Abrornis chlaronotus*, Hodgson, Gray's *Zool. Misc.* p. 82; G. R. Gray, 'Appendix to Catalogue of specimens presented by Mr. Hodgson to the British Museum,' p. 152; v. *Regulus modestus* apud Hodgson.

Resembles the last, but is smaller, with bill conspicuously shorter and darker-coloured, and the rump pale canary-yellow, strongly contrasting with the hue of the back; the median coronal line much more conspicuous, and the pale margins of the tertiaries less so. Its size is that of the European *REGULUS CRISTATUS*.

Length $3\frac{1}{2}$ in., or a trifle more: wing $1\frac{7}{8}$ to 2 in.; its first primary $\frac{9}{16}$ in., the second $\frac{1}{4}$ in. shorter than the third, which does not equal the fourth and fifth. Bill to gape about $\frac{1}{2}$ in., and tarse $\frac{5}{8}$ in.: tail $1\frac{1}{4}$ in. to $1\frac{5}{8}$ in. Upper mandible blackish, the lower pale except towards tip. Legs pale. In other respects like the last, from which it is at once distinguished by its pale pure yellow rump.

This minute species appears to be peculiar to the sub-Himalayan region, where extensively distributed.

Genus *REGULUS*, (antiq.,) Cuvier.

Capt. Hutton states that both *R. IGNICAPILLUS* and *R. CRISTA-*

* A reputed nest, taken near Calcutta, is described *J. A. S.* XII, note to p. 965.

TUS of Europe inhabit the N. W. Himalaya. We have seen only a single male specimen, procured by Capt. Thomas at Simla; and this perfectly resembles *R. CRISTATUS*, except in being considerably larger, and the fine flame-coloured interior crest would seem to be more developed. Length of wing $2\frac{3}{8}$ in., and of tail $1\frac{5}{8}$ in. In several British specimens of *R. CRISTATUS*, the corresponding measurements are 2 in., and $1\frac{3}{8}$ in., with the rest in proportion. Should this difference in size prove constant, the race might be denominated *R. HIMALAYENSIS*; requiring, however, to be first minutely compared with the N. American *R. SATRAPA*, Lichtenstein (v. *tricolor*, Jardine). Mr. Hodgson would not appear to have met with a true *REGULUS* in Nepal.

Genus *CULICIPETA*, nobis, *J. A. S.* XII, 963.

“General structure of *PHYLLOSCOPUS*, but having a narrow Fly-catcher’s bill and armature of rictus, the ridge of the upper mandible angulated, and the breadth of the bill evenly attenuating.” Such are the characters of the first or typical species, to which may be added that the claws, especially that of the hind-toe, are longer and less curved. In other species, however, the form grades to that of *PHYLLOSCOPUS*; but there is a general and marked resemblance of colouring throughout the series, indicative of their unity as a group, and which would help to separate it from the European type *PHYLLOPNEUSTE* (v. *Hippolais*). In general, the upper-parts are green, the lower bright yellow wholly or in part, and the crown exhibits the colouring (variously modified) of *PHYLLOSCOPUS OCCIDENTALIS* and of the subgroup *REGULOIDES*; while the two or three outer tail-feathers are, in most of the species, largely marked with white on the inner web. Their habits appear to be quite similar to those of the *PHYLLOSCOPI*.

1. *C. BURKII*; *Sylvia Burkii*, Burton, *P. Z. S.* 1835, p. 153: *Acanthiza arrogans*, Sundevall (1837); *Cryptolopha auricapilla*, Swainson, $2\frac{1}{4}$ Centen. (1837); *Muscicapa bilineata*, Lesson, *Rev. Zool. de la Soc. Cuv.* 1839, p. 104.

Length $4\frac{3}{8}$ by $6\frac{1}{2}$ in.: wing $2\frac{1}{4}$ in.; its first primary $\frac{3}{4}$ in., and the second $\frac{3}{8}$ in. shorter than the third, which equals the sixth or seventh (in different specimens), and is rather shorter than the intervening two or three: tail $1\frac{3}{4}$ in.: bill to gape exceeding $\frac{1}{2}$ in.;

and tarse $\frac{11}{16}$ in. Irides dark. Bill dusky above; underneath, with the legs, pale amber or brownish-yellow, darker on toes. Plumage, above bright yellowish olive-green; below full siskin-yellow throughout; the cheeks and sides of neck intermediate: over each eye a broad black streak reaching to the occiput, leaving the middle of the head greenish, slightly flanked with ash-grey: tail dusky, its middle feathers margined with the hue of the back, and the inner web of the outermost white nearly throughout, as also the terminal half of that of the next. Some have a slight yellowish wing-band, which in others is barely indicated.

This pretty little bird is not uncommon in Lower Bengal during the cold season, and like the rest of its tribe retires to the sub-Himalayan region to breed. Its bill has more decidedly the Fly-catcher form than in any of the following.

2. *C. CANTATOR*; *Motacilla cantator*, Tickell, *J. A. S.* II, 576: *C. schisticeps*, Hodgson, Gray's *Zool. Misc.* 1844, p. 82; G. R. Gray, 'Appendix to Catalogue of specimens presented by Mr. Hodgson to the British Museum,' p. 153.

Length $4\frac{1}{4}$ in., by $6\frac{3}{8}$ in. expanse: wing $2\frac{1}{4}$ in.; with primaries as in *C. BURKII*: tail $1\frac{3}{4}$ in. Bill to gape nearly $\frac{5}{8}$ in.; and tarse $\frac{5}{8}$ in. Irides dark. Bill light dusky above, amber-coloured below: legs light yellowish-carneous, with a leaden tinge. Plumage, bright olive-green above, yellower on the wings and tail: throat, cheeks, supercilia, lower tail-coverts, and margin of wing, bright yellow; the belly and flanks greyish-white: greater wing-coverts tipped with pale yellow, forming a slight bar on the wing: on each side of the crown a broad black band; and an intermediate narrower greenish one, becoming yellower upon the occiput: upper tertiaries very slightly margined at the tips with yellowish-white; and the tail-feathers have a narrow yellowish-white internal border.

This pretty species is rare in Lower Bengal, becoming commoner to the westward. The bill is narrower and the rectal *setæ* are less developed, while the claws (especially that of the hind-toe) are shorter and more curved, than in *C. BURKII*.

3. *C. PULCHRA*; *Abrornis pulcher*, Hodgson, nobis, *J. A. S.* XIV, 592: *Abr. erochroa* (?), Hodgson, Gray, *Zool. Misc.* 1844, p. 82 (undescribed); G. R. Gray, Appendix to Catalogue, p. 152.

Length $4\frac{1}{4}$ in., of wing $2\frac{1}{8}$ in., with primaries as in *C. BURKII*: tail $1\frac{3}{4}$ in.: bill to gape $\frac{1}{2}$ in.; and tarse nearly $\frac{3}{4}$ in. Bill dusky above, below yellow or amber-coloured; and tarse pale. Plumage, above dull olive-green, brighter on the rump and margins of the wing and tail-feathers, those of the primaries yellowish, and a pale rufescent bar across the wing: two broad black streaks on the crown, and between them a dull greenish streak flanked with ashy: supercilia also dull green; but the orbital feathers are yellow; and the entire under-parts are pale dull yellow, or albescent-yellowish, becoming of a deeper yellow on the belly and lower tail-coverts: tail having its *three* outer feathers wholly white, save the terminal half of their outer web, together with the tip of the inner web of the ante-penultimate and slightly of the penultimate.

Inhabits the Nepal and Sikim Himalaya.*

4. *C. SCHISTICEPS*; *Abrornis schisticeps*, Hodgson, nobis, *J. A. S.* XIV, 592: *Phyllopneuste xanthoschistos*, Hodgson, Gray, *Zool. Misc.* 1844, p. 82 (undescribed); G. R. Gray, 'Appendix to Catalogue,' p. 151.

Length $4\frac{1}{4}$ in.: of wing $2\frac{1}{4}$ in., with primaries as in *C. BURKII*: tail $1\frac{5}{8}$ in.: bill to gape $\frac{5}{8}$ in.; and tarse $\frac{5}{8}$ in. Bill dusky above, below amber-coloured; and feet apparently pale brownish-plumbeous. Plumage, above pale ashy, passing to greenish-yellow on the

* Mr. G. R. Gray suggests that this may be the young of his *ABR. EROCHROA*, Hodgson, which he thus describes:

"Length 5 in.; bill from gape $\frac{1}{2}$ in.; tarse $\frac{3}{4}$ in.: wings under $2\frac{1}{2}$ in. Upper surface olive-green; a streak over each eye from the nostrils, under surface and lower part of back, yellowish-white, brightest on the back [rump?] and vent: wings with the tips of the greater coverts broadly margined with rufous-white: quills brownish-black, narrowly margined with yellowish-green: tail slaty-brown, margined with yellowish-green, the outer feathers principally white."

We suspect that this description merely refers to a fine specimen of *C. PULCHRA*; and may remark that the present is the only species of the series of which the Society possesses but an indifferent specimen. Of the rest, *C. CASTANEOCEPS* we have never seen; but all of the others, save four, we here describe from *recent specimens* shot near Calcutta! The four exceptions are—*PHYLLOSCOPUS OCCIDENTALIS*, and *PH. CHLORONOTUS*, and the two *CULICIPETÆ* which next follow; and to these may be added the *REGULUS*.

rump, wings and tail: below, with the cheeks and lower half of the ear-coverts, wholly bright yellow: a whitish-grey supercilium and narrow medial streak upon the crown, and two broad ill-defined lateral streaks of rather a more dusky grey than that of the back: outermost and penultimate tail-feathers only, white on their inner webs. The young have looser plumage and all the colours less intense.

This appears to be very common throughout the sub-Himalayan territories, and is likewise met with in Arakan; but it appears never to descend from the hills. According to Capt. Hutton, it is a common species at 5000 ft. elevation, and commences building in March. The nest would appear to resemble those of *PHYLLOSCOPUS TROCHILUS* and *PH. RUFUS*. Eggs spotless white. Vide Hutton, in *J. A. S.* XVII, pt. II, p. 688.

5. *C. POLIOGENYS*, nobis, *J. A. S.* XVI, 441.

Length $4\frac{1}{4}$ in.: of wing $2\frac{1}{8}$ in., with the outermost primary $\frac{5}{8}$ in. long, the second exceeding it by $\frac{9}{16}$ in., and the third $\frac{1}{8}$ in. shorter than the fourth, which equals the fifth and sixth: tail $1\frac{5}{8}$ in.: bill to gape $\frac{9}{16}$ in.; and tarse $\frac{5}{8}$ in. Bill dusky above, yellow or amber-coloured below. Legs pale. Plumage, above dark olive-green, slightly yellowish on rump, with a conspicuous narrow yellowish-white wing-band: crown and ear-coverts dusky-grey, with blackish coronal bands; the chin, and feathers proceeding from the base of the lower mandible, greyish-white: rest of the lower-parts bright yellow: tail with its three outer feathers white on the inner web, as in *C. PULCHRA*.

We have only seen this well marked species from Sikim. It might be mistaken for the preceding on a very superficial view; but besides the differences in the details of colouring, its wings are much more rounded and the bill is somewhat less compressed.

6. *C. CASTANEOCEPS*; *Abrornis castaniceps*, Hodgson, nobis, *J. A. S.* XIV, 593; *Abr. castaneoceph*, H., Gray, *Zool. Misc.* 1844, p. 82; G. R. Gray, 'Appendix to Catalogue,' p. 152.

"Length $4\frac{1}{2}$ in.: wing nearly 2 in.: bill to gape above $\frac{5}{8}$ in.: tarse $\frac{5}{8}$ in. Upper surface olive-green: front and top of head, pale rufous-chesnut; hind-head and nape greyish-slate. Lower part of back and abdomen bright yellow: throat white: wings and tail

brownish-black, margined with yellowish-green: greater coverts of the wings tipped with yellow, forming two bands.”—G. R. Gray.

“Above vernal green: belly, vent, and croup, deep yellow. Chin to belly white, passing laterally to soft plumbeous. Top of head chesnut, bounded by black to sides. Bill and legs pale. Length 4 in.: wing $1\frac{1}{6}$ in.: tail $1\frac{5}{8}$ in.: bill to forehead $\frac{3}{8}$ in.: tarse $\frac{3}{4}$ in.”—Hodgson.

Procured by Mr. Hodgson in Nepal. We have never seen a specimen.

Finally, may be noticed a Japanese species of this group.

7. C. TRIVIRGATA; *Sylvia trivirgata*, Temminck, Verreaux *M.S.*: *Phylloscopus trivirgatus*, Strickland, figured and described in Sir W. Jardine’s ‘Contributions to Ornithology,’ November, 1849.

“Length 4 in.; of wing 2 in. 2 l.; middle tail-feathers 1 in. 8 l.; outermost $1\frac{1}{2}$ in.: bill to gape 5 l.; tarse 7 l.

“In plumage, it greatly resembles the broader-billed but closely allied C. BURKEI of India. Middle of crown olive-yellow, which occupies the inner webs of the feathers, the outer webs being deep fuscous, nearly black, with an olive tinge, forming a broad dark stripe on each side of the crown: between this and the eye is a superciliary streak of clear yellow: a streak of fuscous passes through the eye; the cheeks, throat, and lower-parts are bright yellow, with an olive tinge; back and wings yellowish-olive: beak horn-coloured, the base of lower mandible pale; and legs brown.

“Inhabits the island of Java.” Strickland.

A Passage in the life of Válmíki.—By FITZ-EDWARD HALL, Esq. *M. A.*

It is a current belief, in many parts of India, that the poet Válmíki, the author of the Rámáyana, was a *thug* or strangler. This notion was probably derived from a strain put upon the following verses, which make out Válmíki to have been, originally, on his own confession, simply a robber. This extract also embraces the received account of the origin of the poet’s name.

राम त्वन्नाममहिमा वर्ण्यते केन वा कथम् ।
 यत्प्रभावादहं राम ब्रह्मर्षित्वमवाप्तवान् ॥
 अहं पुरा किरातेषु किरातैः सह वर्धितः ।
 जन्ममात्रद्विजत्वं मे शूद्राचाररतः सदा ॥
 शूद्रायां बहवः पुत्रा उत्पन्ना मेऽजितात्मजः ।
 ततश्चोरैश्च सङ्गम्य चोराऽहमभवं पुरा ॥
 धनुर्बाणधरो नित्यं जीवानामन्तकोपमः ।
 एकदा मुनयः सप्त दृष्ट्वा महति कानने ॥
 साक्षान्मया प्रकाशन्तो ज्वलनार्कसमप्रभाः ।
 तानन्वधार्वं लोभेन तेषां सर्वपरिच्छेदान् ॥
 ग्रहीतुकामस्तत्राहं तिष्ठ तिष्ठेति चाब्रुवम् ।
 दृष्ट्वा मां मुनयोऽपृच्छन् किमायासि द्विजाधम ॥
 अहं तानब्रुवं किञ्चिदादातुं मुनिसत्तमाः ।
 पुत्रदारादयः सन्ति बहवो मे बुभुक्षिताः ॥
 तेषां संरक्षणार्थाय चरामि गिरिकानने ।
 ततो मामूचुरव्यग्राः पृच्छ गत्वा कुटुम्बकम् ॥
 यो यो मया प्रतिदिनं क्रियते पापसञ्चयः ।
 यूयं तद्भागिनः किं वा नेति वेति पृथक् पृथक् ॥
 वयं स्थास्यामहे यावदागमिष्यसि निश्चयम् ।
 तथेत्युक्त्वा गृहं गत्वा मुनिभिर्यदुदीरितम् ॥
 अपृच्छं पुत्रदारादींस्तैरुक्तोऽहं रघूत्तम ।
 पापं तवैव तत् सर्वं वयं तु फलभागिनः ॥
 तच्छ्रुत्वा जातनिर्वेदो विचार्य पुनरागमम् ।
 मुनयो यत्र तिष्ठन्ति करुणापूर्णमानसाः ॥
 मुनीनां दर्शनादेव शुद्धान्तःकरणोऽभवम् ।
 धनुरादीन् परित्यज्य दण्डवत् पतितोऽस्य हम् ॥

रक्षध्वं मां मुनिश्रेष्ठा गच्छन्तं निरयाणवम् ।
 इत्यग्रे पतितं दृष्ट्वा मामूचुर्मुनिसत्तमाः ॥
 उत्तिष्ठोत्तिष्ठ भद्रं ते सफलः सस्रमागमः ।
 उपदेक्ष्यामहे तुभ्यं किञ्चित् तेनैव मोक्ष्यसे ॥
 परस्परं समालोच्य दुर्दत्तोऽयं द्विजाधमः ।
 उपेक्ष्य एव सद्वृत्तैस्तथापि शरणं गतः ॥
 रक्षणीयः प्रयत्नेन मोक्षमार्गोपदेशतः ।
 इत्युक्त्वा राम ते नाम व्यत्यस्ताक्षरपूर्वकम् ॥
 एकाग्रमनसात्रैव मरेति जप सर्वदा ।
 आगच्छामः पुनर्यावत् तावदुक्तं सदा जप ॥
 इत्युक्त्वा प्रययुः सर्वे मुनयो दिव्यदर्शनाः ।
 अहं यथोपदिष्टं तेस्तथाकरवमञ्जसा ॥
 जपन्नेकाग्रमनसा बाह्यं विस्मृतवानहम् ॥
 एवं ब्रह्मतिथे काले गते निश्चलरूपिणः ॥
 सर्वसङ्गविहीनस्य वल्मीकोऽभून्ममोपरि ।
 ततो युगसहस्रान्ते ऋषयः पुनरागमन् ॥
 मामूचुर्निष्क्रमस्वेति तच्छ्रुत्वा तूर्णमुत्थितः ।
 वल्मीकान्निर्गतश्चाहं नीहारादिव भास्करः ॥
 मामप्याज्जर्मुनिगणा वाल्मीकिस्त्वं मुनीश्वर ।
 वल्मीकात् सम्भवो यस्माद्वितीयं जन्म तेऽभवत् ॥
 इत्युक्त्वा ते ययुर्दिव्यगतिं रघुकुलोत्तम ।

Translation of the above.

By whom, or how, O Ráma, can the greatness of thy name be rehearsed,—that name by whose power I, O Ráma, have attained the rank of a Bráhmaṇ saint? In bygone times I was bred among Kirátas, with the children of Kirátas.* But by birth only was I

* “ By Kirátas, foresters and mountaineers are intended, the inhabitants, to the present day, of the mountains east of Hindustan ” Wilson's *Vishnu Purāṇa*, p. 175, note 4.

a Bráhmaṇ; *for* I was perpetually devoted to the practices of S'údras. From S'údra women many children were born to me of unsubdued passions. And at last, having fallen in with robbers, I *myself*, of yore, became a brigand,—bearing constantly a bow and arrows, and resembling, to men, the god of death. In a great forest, on a certain occasion, I saw before me the seven Munis,* resplendant, and glorious like fire and the sun. Through cupidity I pursued them, longing to seize their possessions; and I shouted “stop, stop.” Seeing me, the Munis asked, “Wherefore hast thou come, base Bráhmaṇ?” “To acquire something, O most excellent of Munis,” was my reply to them. “My children, my wife, and others,—many,—are starving. To save them I wander through the mountain forests.” Upon this, they, undismayed, said to me: “Go and ask your family, one by one, whether they *consent*, or not, to participate in *the guilt* of the numerous sins that are daily committed by thee. We will certainly remain *here* until you return.” Replying, ‘yes,’ I went home, and put the question propounded by the Munis, to my children, wife, and others. They replied to me, O noblest of the Rághavas, “All the sin is, *we deem*, thy own alone: we are *willing to be* sharers in the *immediate* fruit of it only.” Contrite at hearing this, I went back, thoughtful, to the place where the Munis, with hearts full of compassion, were waiting. At the very sight of them, my soul was purified. Flinging away my bow and other *weapons*, I fell prostrate, *crying*, “Save, O excellent Munis, me who am on the road to the sea of perdition.” Beholding me lying before them, the venerable Munis said to me: “Rise, rise: blessings *be* upon thee. Communion with the pious is effectual. We will instruct thee somewhat; *and* so thou shalt be saved.” Looking at each other, *they continued*: “This vile Bráhmaṇ, as being addicted to evil courses, deserves only to be shunned by the virtuous. Since, however, he has come for sanctuary, he must be diligently protected, by being taught the way of salvation.” So saying, O Ráma, *they enjoined that*, with fixed attention, *I should* unremittingly meditate, in that very place, upon thy name, its syllables being transposed, namely,

* The name of *Muni* is applied to any divine sage. It is here used for *Rishi*, as appears from the sequel. For the various conflicting accounts of the seven *Ṛishi*s, see Wilson's *Vishṇu Purāṇa*, p. 49, note 2.

mará.* “Meditate,” said they, “as directed, till we come again.” Having thus spoken, the divinely wise Munis departed. At once I did as I had been bidden by them. With concentrated mind I meditated, and lost all consciousness of things external. Above me, rigid in figure, and detached from all commerce *with the world*, there arose, after a long lapse of time, thus *employed*, an ant-hill. Subsequently, at the close of thousands of cycles, the Rishis returned. “Come out,” said they to me; and immediately, on hearing this *command*, I stood up. And I emerged from the ant-hill, like the sun from the mist of morning.† The band of Munis then addressed me: “Great Muni, be thy name Válmíki; for thy egress from the white-ant hill (*Válmika*) has been to thee a second birth.” Thus speaking, O most eminent of the race of Raghu, they proceeded on the road to heaven.‡

This narrative is to be found at S'l. 64—86 of the sixth chapter of the second book, called *Ayodhyá-kāṇḍa*, of the *Adhyátma-rámáyana*. The *Adhyátma-rámáyana* is said, by Náges'a Bhaṭṭa, in his commentary on it, to be a portion of the *Brahmāṇḍa-purāṇa*. This annotator further states, in opposition to the general opinion, that the Válmíki here spoken of is not the author of the *Rámáyana*, but a descendant of Prachetas.

Literary Intelligence.

Mr. Hodgson still prosecutes at Darjiling the philological researches which had reached so interesting a point on his departure for England, towards the close of 1852. Pending the receipt of a full communication which may shortly be expected from him, the following extracts from his recent letters will show the result of his investigations; “results not only decisive,” says Mr. H., “of the widest assigned scope of Tartar affinities, but also of high moment in illustration of the science of language in general.

* The Rishis considering him unworthy to repeat the name of Ráma in its ordinary form.

† During the Indian winter.

‡ This passage is alluded to by Prof. Wilson, in his *Hindu Theatre*, Vol. I. p. 313, foot-note: 2nd Ed.

Not only are all the Tartars from America to Oceania (both inclusive) demonstrated to form one family, with a clearness equal to that brought by our Bopps and Grimms to demonstrate the full scope of Indo-European affinities, but that great law of language expounded by Spinosa and Koerber in relation to Hebrew, and by Tooke in reference to English, is shown to have an universal character by its thorough and palpable bearing upon the Tartar tongues, wherein moreover it may be grasped and held fast, not as an induction but as a clear extant fact, owing to the so long retarded and yet very imperfect cultivation these tongues have obtained. And, again, the alleged grand distinction of monosyllabism and polysyllabism upon which the inunity of the Tartars has been so confidently rested, is shown to be valueless; the so-called monosyllabism being not really such, and the so called polysyllabism being mere repetition of the same or of synonymous syllables, roots and words: in other words it is syntheticism.

“So that America is linked to Tartary by the greatest and most essential characteristic of her languages. In order to reach such results, I have had to weigh every syllable and every letter of each word, and to trace each to a root, demonstrated to be such by its standing *alone* as a word. In the vast majority of words, I have obtained one or more samples of the pure monosyllabic form of the vocable, and I have thence proceeded to the polysyllables, still seeking for the radical monosyllable of every syllable of even the longest words. My media of investigation and of test have been: 1st, Comparison of the differing synonymies of a given tongue. 2nd, Comparison of the written and spoken forms of such tongues as have both. 3rd. Comparison of the ancient and modern words of given cultivated tongues, where available, as happily is the case, for me, in regard to the Deccani languages. 4th. Comparison of the dialects of a confessedly single tongue, rich in such varieties, as the Naga and Garo for instance. 5th, Comparison of the languages of the old broken and of the recent dominant tribes. 6th, Comparison of given words standing apart and of those words as they occur in composition—a medium of proof which, by the way, alone suffices to show the emptiness of the monosyllabic dogma. Happily for the furtherance of my researches, I obtained, after my return from Europe,

a fresh series of Himalayan tongues, and one of very great value as serving to add several links to the chain of affinities that else had been wanting. These new tongues are those of the broken tribes of Himalaya of which the Chepang, already published, is one. Our broken tribes are precisely analogous to those of China, Indo-China, Malaya, Polynesia and Tamulia; and the state of the languages every where reveals the same fact, that successive waves of one and (essentially) the same human tide swept over the South from the North, some reaching our India direct from Tibet, others indirect from Indo-China.'

"With reference to Indian philology only, the following are the results of my researches. 1st, That all the cultivated Tamulian tongues (in Ceylon as well as Deccan) are essentially one. 2nd, That the whole of the uncultivated Tamulian tongues (Kol, Gondi, Maler, Lerka, &c.) are essentially one. 3rd, That the above two classes are essentially but one and the same class. 4th, That that class is the Tartaric, to use its largest and general designation. 5th, That a vast number of the most indispensable vocables of the so-called Arian vernaculars of India (Hindi, Urdu, Asamese, Bengali, Uria, Mah-ratti, &c.) are thoroughly Tartar. 6th, That a very considerable number of Sanskrit vocables of the most indispensable use, are Tartar, and that not merely in their ordinary or composite, but also in their radical forms.

"So far from seeking I have rather avoided such words as belong to 5 and 6, lest I should retard the reception of my more immediate and more general results; but I have found it impossible to leave those words out of view altogether, and, though I do not anticipate ever becoming an advocate of the doctrine of Dr. Latham and Mr. Crawfurd, yet am I already much struck with the fact that very numerous words in my vocabularies, against which when they were compiled I wrote H. U. or S. to denote a Hindi, Urdu or Sanskrit origin, turn out upon closer investigation to be thoroughly Tartar, even when analysed and resolved into their roots, as well as when taken statu quo of speech and book."

In Jameson's Journal for April will be found a paper by Dr. Buist, on the Physical Geography of Hindustan.

Lieut. Eastwick has brought out a 2nd edition of the two first vols.

of his translation of Bopp's Comparative Grammar, but the book is still disfigured by many inaccuracies, which are noticed with some severity in the Westminster Review for July.

In the *Journal Asiatique* No. 2 (March and April) is the first part of a Sanskrit work, text and translation, called *Bhoja-Prabandha*, or the history of Bhoj of Malwa, not the Bhoj of the Mahábhárat, but Bhoj son of Sindhoula, who reigned about the middle of the 10th century, A. D. and whose capital was at Dhar or Dhara on the Nerbudda. Sindhoula is not mentioned in the list which Pere Tieffenthaler has given of the Malwa kings, but he, Prof. Wilson and Wilford, who had closely studied the *Bhoja-Prabandha*; all place Bhoj between 913 and 967.

The MS., of the completeness of which the Editor M. Pavie has doubts, is one of those taken from Bombay by M. d'Ochoa. The 1st part contains historical matter, the 2nd which is to appear in a future No. and which is much fuller, is in.

The next article is an extract from an Arabic work by Aly Ossai-biah called the *History of Physicians*, which is translated by M. Sanguinetti. The author was a native of Damascus and lived in the 13th century. M. deMeynard's continuation of his *Tableau Littéraire* for Transoxiana and Khorasan complete the No.

The war in Turkey can scarcely fail to leave as one of its consequences an extended taste in Europe for the study of oriental languages and literature. Alexander Chodzko, known by his grammar of the modern Persian language and other works, has published a *Manual for the use of the French army* under the title of '*Le Dragoman Ture*', and in our own country Max Müller of Oxford has responded to the invitation of Sir Chas. Trevelyan by drawing up an elaborate essay on the '*Languages of the Seat of War in the East*,' of which two copies have been sent for our library. The latter, though hurriedly written, will prove of more than temporary service; it brings together and into a small compass much valuable philological information beyond the reach of the generality of students.

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR AUGUST, 1854.

At a meeting of the Society held on the 2nd inst. at the usual hour,

SIR JAMES COLVILLE, Kt. President, in the Chair,

The minutes of the last month's proceedings were read and confirmed, and the accounts and vouchers for the months of March, April and May laid on the table.

Presentations were received—

1. From Capt. Thuillier, Deputy Surveyor General, a Map of the Twenty-four Pergunnahs.

2. From the Curators of the Academy of Leyden, 'Libri Exodi et Levitici secundum Arabicam Pentateuchi Samaritani Versionem.

3. From Maulavi Mohammad Alum Ali Khan, an Arabic MS. of the Kámús, in 2 Vols.

4. From Capt. Sherwill, through Capt. Thuillier, a collection of ancient Hindu copper and silver coins.

The following is an extract from Capt. Sherwill's note on these coins :

"As far as I can ascertain, they are coins of the Cheeroo Rajahs who, in olden days, ruled over Behar and that before the Moham-medan conquest. The coins were dug up at Futooha, or near to it, that is, about ten miles to the east of the city of Patna. They were twelve feet below the level of the country, and in their neighbourhood was found a flooring of very large flat bricks about two feet square."

Lt.-Col. Proby T. Cautley of the Bengal Artillery, F. R. S., F. G. S. was, pursuant to notice given at the last meeting by the Council, balloted for, and duly elected an honorary member.

Mr. W. Grapel was balloted for, and elected an ordinary member.

R. Spankie, Esq. C. S. was named for ballot at the next meeting: proposed by G. H. Freeling, Esq. and seconded by Dr. Clarke.

The Council submitted a report recommending that the offer of M. Alexander Von Kremer, Dragoman of the Austrian Consulate at Alexandria, to edit the original text of Waquidy on the Wars of Mohammad for publication in the Bibliotheca Indica, be thankfully accepted.

Ordered that the recommendation be adopted.

Communications were received—

1. From E. Thomas, Esq., a paper entitled ‘Notes on the present state of the Excavations at Sarnáth.’

2. From the Assistant Secretary to the Government of the North Western Provinces, forwarding copy of a Meteorological Register kept at the Office of the Secretary to the Government N. W. P. for the month of June, 1854.

3. From Dr. Fayrer, Lucnow, enclosing a copy of Meteorological Observations kept at the Lucnow Residency, for the month of May, 1854.

4. From Bábu Rádhánáth Sikdár, enclosing abstracts of Meteorological Observations taken at the Surveyor General’s Office, during the month of April last.

The Librarian submitted his usual monthly report.

The Curator of the Zoological Museum exhibited a small collection of Insects which he had received from Ceylon, and a very large Fungus (*Boletus*?) which had been brought down from Upper Assam.

LIBRARY.

The library has received the following accession of books since the last meeting.

Presented.

The Kámús, an Arabic Dictionary in two volumes MS.—By MOULAVI MOHAMMAD ALAM ALI KHAN.

Libri Exodi et Levitici secundum Arabicam Pentateuchi Samaritani versionem ab Abu Saido conscriptum quos ex tribus codicibus edidit A. Kuenen. Lugduni Bat. 1854, 8vo.—By THE CURATORS OF THE ACADEMY OF LEYDEN.

Natuurkundig Tijdschrift voor Nederlandsch Indië, Deel VI. aflevering III. a IV.—BY THE NATURAL HISTORY SOCIETY OF BATAVIA.
 Journal Asiatique, for January, 1854.—BY THE SOCIÉTÉ ASIATIQUE.
 The Oriental Christian Spectator, for July, 1854.—BY THE EDITOR.
 Journal of the Indian Archipelago, for January and February, 1854.—BY THE EDITOR.

Calcutta Christian Observer, for August, 1854.—BY THE EDITORS.

The Oriental Baptist, No. 92.—BY THE EDITOR.

The Upadeshak, No. 92.—BY THE EDITOR.

The Proceedings of the Royal Society of London, for April and May 1854.—BY THE SOCIETY.

The Bibidhārtha Saṅgraha, No. 28.—BY THE EDITOR.

The Annual Report of the Tattwabodhini Sabhā, for the Bengali year 1776.—BY THE SABHĀ'.

Exchanged.

The Athenæum for April, 1854.

The London, Edinburgh and Dublin Philosophical Magazine for May, 1854.

The Calcutta Review, for June, 1854.

Purchased.

Comptes Rendus, Nos. 14 to 17.

The Annals and Magazine of Natural History for May, 1854.

Rāghava Pāndaviya, an Epic Poem by Kavirāja Pandita with a commentary styled Kapāta-vipātika. By Premchānd Tarkavāgīsa, 5 copies.

RA'JENDRALA'L MITTRA.

August 2nd, 1854.

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta, in the
month of April, 1854.*

Latitude 22° 33' 1" North. Longitude 88° 20' 34" East.

Daily Means, &c. of the observations and of the hygrometrical elements
dependent thereon.

Date.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer during the day.			Mean Dry Bulb Thermometer.	Range of the Tempe- rature during the day.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
1	Inches. 29.878	Inches. 29.961	Inches. 29.797	Inches. 0.164	° 79.5	° 90.2	° 70.4	° 19.8
2	<i>Sunday.</i>							
3	.796	.873	.692	.181	81.6	90.1	71.6	18.5
4	.761	.822	.687	.135	78.9	88.2	70.7	17.5
5	.751	.824	.683	.141	81.0	88.1	72.0	16.1
6	.640	.720	.545	.175	85.3	95.9	77.5	18.4
7	.621	.689	.554	.135	85.6	97.3	77.8	19.5
8	.610	.673	.554	.119	85.5	94.6	79.9	14.7
9	<i>Sunday.</i>							
10	.627	.700	.557	.143	85.6	94.4	80.2	14.2
11	.675	.756	.597	.159	85.7	94.8	78.8	16.0
12	.724	.813	.633	.180	85.5	93.7	79.6	14.1
13	.664	.758	.573	.185	84.3	92.2	75.6	16.6
	<i>Good</i>							
14	<i>Friday.</i>							
15	.731.	.795	.684	.111	73.1	77.8	69.6	8.2
16	<i>Sunday.</i>							
17	.711	.766	.630	.136	76.2	82.4	72.0	10.4
18	.767	.823	.717	.106	80.2	90.2	70.6	19.6
19	.799	.879	.732	.147	83.5	92.0	77.0	15.0
20	.765	.852	.668	.184	83.2	90.2	77.4	12.8
21	.698	.766	.608	.158	83.4	91.2	77.8	13.4
22	.659	.736	.510	.226	81.8	90.8	76.5	14.3
23	<i>Sunday.</i>							
24	.642	.717	.568	.149	84.2	92.4	76.5	15.9
25	.743	.822	.688	.134	83.2	91.0	77.9	13.1
26	.779	.856	.697	.159	85.4	93.4	79.3	14.1
27	.731	.806	.633	.173	86.5	93.6	81.0	12.6
28	.637	.710	.551	.159	86.7	94.8	81.6	13.2
29	.655	.725	.582	.143	86.6	93.8	81.0	12.8
30	<i>Sunday.</i>							

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta, in the
month of April, 1854.*

Daily Means, &c. of the observations and of the hygrometrical elements
dependent thereon. (Continued.)

Date.	Mean Wet Bulb Ther- mometer.	Dry Bulb above Wet.	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of air.	Additional weight of Va- pour required for com- plete saturation.	Mean degree of Humi- dity, complete satura- tion being unity.
1	o 74.1	o 5.4	o 71.4	o 8.1	Inches. 0.761	T. gr. 8.22	T. gr. 2.44	0.771
2	<i>Sunday.</i>							
3	77.2	4.4	75.0	6.6	0.854	9.18	2.16	.810
4	74.9	4.0	72.9	6.0	0.797	8.63	1.84	.824
5	77.6	3.4	75.9	5.1	0.879	9.47	1.67	.850
6	81.1	4.2	79.0	6.3	0.970	10.37	2.27	.820
7	81.7	3.9	79.7	5.9	0.992	10.59	2.17	.830
8	81.6	3.9	79.6	5.9	0.989	10.56	2.16	.830
9	<i>Sunday.</i>							
10	81.5	4.1	79.4	6.2	0.983	10.49	2.27	.822
11	77.6	8.1	73.5	12.2	0.814	8.69	4.11	.679
12	80.6	4.9	78.1	7.4	0.943	10.08	2.64	.792
13	79.7	4.6	77.4	6.9	0.922	9.87	2.41	.804
	<i>Good</i>							
14	<i>Friday.</i>							
15	71.5	1.6	70.7	2.4	0.744	8.15	0.64	.927
16	<i>Sunday.</i>							
17	73.9	2.3	72.7	3.5	0.792	8.61	1.05	.891
18	76.9	3.3	75.2	5.0	0.860	9.28	1.60	.853
19	79.3	4.2	77.2	6.3	0.916	9.83	2.17	.819
20	79.1	4.1	77.0	6.2	0.910	9.77	2.12	.822
21	78.5	4.9	76.0	7.4	0.882	9.47	2.49	.792
22	76.0	5.8	73.1	8.7	0.803	8.63	2.77	.757
23	<i>Sunday.</i>							
24	79.6	4.6	77.3	6.9	0.919	9.84	2.40	.804
25	79.1	4.1	77.0	6.2	0.910	9.77	2.12	.822
26	81.0	4.4	78.8	6.6	0.964	10.29	2.39	.812
27	82.4	4.1	80.3	6.2	1.011	10.78	2.32	.823
28	82.5	4.2	80.4	6.3	1.014	10.81	2.37	.820
29	81.7	4.9	79.2	7.4	0.976	10.41	2.73	.792
30	<i>Sunday.</i>							

Abstract of the Results of the Hourly Meteorological Observations taken at the Surveyor General's Office, Calcutta, in the month of April, 1854.

Hourly Means, &c. of the observations and of the hygrometrical elements dependent thereon. (Continued.)

Hour.	Mean Height of the Barometer at 32° Fahr.	Range of the Barometer for each hour during the month.			Mean Dry Bulb Thermometer.	Range of the Temperature for each hour during the month.		
		Max.	Min.	Diff.		Max.	Min.	Diff.
	Inches.	Inches.	Inches.	Inches.	°	°	°	°
Mid-night.	} 29.723	29.882	29.597	0.285	78.7	82.8	71.4	11.4
1		.866	.598	.268	78.4	82.6	70.7	11.9
2		.862	.579	.283	78.0	82.2	71.8	10.4
3		.862	.567	.295	77.8	82.0	72.0	10.0
4		.875	.562	.313	77.7	82.2	71.4	10.8
5		.891	.585	.306	77.5	82.0	70.5	11.5
6		.901	.601	.300	77.5	81.7	70.4	11.3
7		.924	.637	.287	78.3	82.8	71.8	11.0
8		.954	.663	.291	80.7	85.2	72.3	12.9
9		.961	.671	.290	83.2	88.0	74.2	13.8
10		.961	.666	.295	85.4	90.2	74.0	16.2
11		.944	.669	.275	87.1	91.4	72.2	19.2
Noon.	.743	.920	.651	.269	88.8	93.0	72.5	20.5
1	.718	.892	.618	.274	89.9	94.4	73.3	21.1
2	.688	.849	.595	.254	90.5	96.0	70.0	26.0
3	.663	.820	.562	.258	90.8	97.0	71.2	25.8
4	.643	.797	.545	.252	90.4	97.3	72.0	25.3
5	.642	.803	.549	.254	89.1	95.0	72.0	23.0
6	.660	.817	.556	.261	86.1	91.3	71.4	19.9
7	.672	.831	.510	.321	83.6	87.2	70.7	16.5
8	.694	.837	.600	.237	81.8	85.8	69.8	16.0
9	.720	.870	.612	.258	80.9	85.2	69.8	15.4
10	.731	.876	.622	.254	80.3	84.6	69.6	15.0
11	.730	.871	.608	.263	79.4	84.2	69.7	14.5

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta, in the
month of April, 1854.*

Hourly Means, &c. of the observations and of the hygrometrical elements
dependent thereon. (Continued.)

Hour.	Mean Wet Bulb Thermometer.	Dry Bulb above Wet.*	Computed Dew Point.	Dry Bulb above Dew Point.	Mean Elastic force of Vapour.	Mean Weight of Vapour in a cubic foot of air.	Additional weight of Vapour required for complete saturation.	Mean degree of Humidity, complete saturation being unity.
	o	o	o	o	Inches.	T. gr.	T. gr.	
Mid-night.	76.5	2.2	75.4	3.3	0.865	9.37	1.04	0.900
1	76.4	2.0	75.4	3.0	.865	.37	0.94	.909
2	76.2	1.8	75.3	2.7	.862	.34	.85	.917
3	76.2	1.6	75.4	2.4	.865	.39	.74	.927
4	76.2	1.5	75.4	2.3	.865	.39	.71	.930
5	76.1	1.4	75.4	2.1	.865	.39	.65	.935
6	76.2	1.3	75.5	2.0	.868	.42	.62	.938
7	76.9	1.4	76.2	2.1	.887	.62	.66	.936
8	78.4	2.3	77.2	3.5	.916	.87	1.17	.894
9	75.9	3.7	77.6	5.6	.928	.95	.94	.837
10	80.4	5.0	77.9	7.5	.937	10.00	2.68	.789
11	81.2	5.9	78.2	8.9	.946	.07	3.26	.755
Noon.	81.8	7.0	78.3	10.5	.949	.05	3.95	.718
1	82.1	7.8	78.2	11.7	.946	.00	4.46	.692
2	82.1	8.4	77.9	12.6	.937	9.90	4.82	.673
3	82.1	8.7	77.7	13.1	.931	.84	5.00	.663
4	81.8	8.6	77.5	12.9	.925	.78	4.89	.667
5	81.6	7.5	77.8	11.3	.934	.91	4.21	.702
6	79.7	6.4	76.5	9.6	.866	.56	3.39	.738
7	78.8	4.8	76.4	7.2	.893	.58	2.45	.796
8	77.7	4.1	75.6	6.2	.871	.37	2.03	.822
9	77.4	3.5	75.6	5.3	.871	.39	1.71	.846
10	77.2	3.1	75.6	4.7	.871	.39	1.52	.861
11	76.8	2.6	75.5	3.9	.868	.38	1.24	.853

*Abstract of the Results of the Hourly Meteorological Observations
taken at the Surveyor General's Office, Calcutta, in the
month of April, 1854.
Solar radiation, Weather, &c.*

Date.	Max Solar radiation.	Rain.	Prevailing direction of the Wind.	General aspect of the Sky.
	o	Inc.		
1	144.0	..	S. E. or E or N. W.	Cloudless
2	<i>Sunday.</i>			
3	129.6	..	S. or S. E.	Cloudless till 8 A. M. scattered ☉ till 4 P. M. cloudless till 9 P. M. overcast and raining afterwards.
4	126.0	0.94	S. E. or S.	Cloudy till 3 A. M. cloudless till 11 A. M. cloudy afterwards, with drizzling between 6 and 7 P. M.
5	130.4	0.18	S. or S. E.	Cloudless till 5 A. M. cloudy till 8 P. M. cloudless afterwards.
6	142.0	..	S. or S. E.	Cloudless.
7	145.0	..	S. E. or S. W.	Nearly cloudless the whole day.
8	144.2	..	S. W. or S. or E.	Scattered ☉ or cloudless.
9	<i>Sunday.</i>			
10	130.0	..	S. E. or S.	Cloudy till 6 P. M. cloudless afterwards.
11	139.5	..	S.	Cloudless till 7 A. M. scattered ☌ or ☌ till 6 P. M. cloudless till 9 P. M. scattered ☌ afterwards.
12	143.0	..	S.	Nearly cloudy the whole day.
13	127.0	..	S.	Nearly cloudy the whole day.
14	<i>Good Friday.</i>			
15	..	4.13	S. or S. E.	Overcast, and also raining from 9 A. M. to 2 P. M.
16	<i>Sunday</i>	1.44		
17	..	..	S. or E.	Nearly cloudy the whole day.
18	145.0	0.56	N. E. or E. or S.	Overcast and raining till 5 A. M. cloudless till 11 A. M. cloudy till 5 P. M. cloudless afterwards.
19	149.5	..	Calm or S. or S. E.	Cloudless till 7 A. M. scattered ☌ or ☌ or ☌ till 7 P. M. cloudless afterwards.
20	136.2	..	S. or S. E.	Cloudy till 3 A. M. cloudless till 7 A. M. scattered ☌ or ☌ till 4 P. M. cloudless afterwards.
21	130.5	..	S. E. or S.	Scattered ☌ till 11 A. M. cloudless till 3 P. M. scattered ☌ till 7 P. M. cloudless afterwards.
22	126.0	..	S. or S. E.	Cloudless till 6 A. M. cloudy afterwards.
23	<i>Sunday.</i>			
24	141.0	..	S. E. or W. or N. E.	Cloudless till 7 A. M. scattered ☌ till 4 P. M. cloudless afterwards.
25	126.0	..	S. or N. E. or E.	Cloudless till 6 A. M. scattered ☌ or ☌ till 7 P. M. cloudless afterwards.
26	136.4	..	Calm or S.	Cloudless till 6 A. M. scattered ☌ or ☌ till 6 P. M. cloudless afterwards.
27	137.0	..	S. or S. E.	Scattered clouds of various kinds.
28	142.0	..	S.	Cloudless. [cloudy afterwards.
29	145.0	..	S.	Cloudless till 3 A. M. scattered ☌ or ☌
30	<i>Sunday.</i>			

☌ Cirri, ☌ cirro-strati, ☌ cumuli, ☌ cumulo-strati, ☌ nimbi,—i strati, ☌ cirro-cumuli.

Meteorological Register kept at the Office of the Secretary to Government, N. W. P. Agra, for the Month of June, 1854.

Maximum pressure observed at 9.50 A. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Direction of the Wind.	
1	29.135	106.9	106.9	69.5	..	..	N. W.	Clear
2	29.135	102.5	102.8	76.3	..	..	N. W.	Ditto
3	29.157	102.7	103.7	75.6	..	..	N.	Ditto
4	29.157	102.9	103.8	76.0	..	..	W.	Ditto
5	29.155	103.0	103.5	77.2	..	..	N. W.	Ditto
6	29.135	103.8	104.9	75.0	..	..	N. W.	Ditto
7	29.093	104.5	104.9	75.6	..	..	N. W.	Ditto
8	29.131	103.5	103.3	78.2	..	..	N. W.	Ditto
9	29.167	99.8	100.3	81.0	..	..	W.	~ scattered in zenith
10	29.185	97.2	98.2	79.5	..	..	N. W.	Clear
11	29.131	99.9	100.8	80.0	..	..	W.	~ scattered
12	29.069	102.0	102.2	80.9	..	..	N. W.	Clear
13	29.025	98.8	98.8	82.0	..	..	S. W.	Hazy
14	29.113	86.7	86.0	80.1	..	..	S. E.	~ all over
15	29.155	88.5	89.1	79.4	..	..	N. W.	~ Ditto
16	29.137	96.5	97.5	80.4	..	..	W.	Clear
17	29.111	97.8	98.0	80.0	..	..	N. W.	Ditto
18	29.143	93.0	93.9	80.0	..	..	E.	~ scattered
19	29.149	90.0	88.9	80.0	..	..	E.	~ all over
20	29.155	91.5	92.0	81.0	..	..	S. E.	~ Ditto
21	29.147	92.5	93.2	80.2	..	..	S. E.	~ in zenith ~ Hazy
22	29.097	92.2	93.3	81.0	..	..	W.	~ all over
23	29.075	90.1	91.2	83.3	..	..	W.	~ Ditto
24	29.055	85.0	84.0	81.0	..	..	E.	~ Ditto
25	29.205	85.0	84.0	81.5	..	..	..	~ Ditto
26	29.211	85.0	85.5	81.0	..	..	S. E.	~ Ditto
27	29.267	90.0	90.5	80.0	..	..	S. E.	~ scattered
28	29.197	88.2	87.7	83.0	..	..	S. E.	~ all over
29	29.125	86.0	86.6	82.0	..	..	E.	~ Ditto
30	29.123	85.8	86.4	82.4	..	..	N. E.	~ scattered all over
Mean.	29.138	95.0	95.396	79.436	..	..		..

Note. The dry bulb and Maximum Register do not agree, the former always reads more than the latter, the average difference is 1.6, at times it is far greater.

Meteorological Register kept at the Office of the Secretary to Government, N. W. P. Agra, for the Month of June, 1854.

Observations at apparent Noon.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Direction of the Wind.	
1	29.121	110.0	110.0	69.5	..	..	N. W.	Clear
2	29.109	107.2	107.5	77.2	..	..	N. W.	Ditto
3	29.141	105.5	105.5	77.3	..	..	N. W.	Ditto
4	29.139	105.8	106.4	77.6	..	..	W.	Ditto
5	29.125	106.6	107.2	77.5	..	..	N. W.	Ditto
6	29.117	108.2	109.4	76.0	..	..	N. W.	Ditto
7	29.077	108.9	108.7	76.0	..	..	N. W.	Ditto
8	29.105	106.6	107.1	81.0	..	..	N. W.	Ditto
9	29.137	104.0	105.3	81.7	..	..	W.	Ditto
10	29.175	102.8	103.8	79.5	..	..	N. W.	Ditto
11	29.108	107.0	108.0	80.5	..	..	N. W.	~ to E.
12	29.045	104.3	104.8	80.5	..	..	N. W.	Clear
13	29.069	101.5	101.2	82.4	..	..	S. W.	Hazy
14	29.129	89.0	88.3	81.4	..	..	N.	~ all over
15	29.155	92.0	93.0	79.5	..	..	S. W.	~ Ditto
16	29.131	99.1	99.3	80.4	..	..	W.	~ scattered
17	29.089	100.9	101.6	80.4	..	..	W.	Clear
18	29.115	97.0	98.0	80.5	..	..	E.	~ scattered
19	29.105	93.9	94.0	79.0	..	..	W.	~ all over
20	29.141	93.8	94.5	81.8	..	..	N. W.	~ scattered
21	29.141	65.7	96.2	81.5	..	..	W.	~ no zenith
22	29.097	96.6	97.3	83.2	..	..	S. W.	~ all over
23	29.069	95.2	95.7	81.5	..	..	W.	~ Ditto
24	29.147	85.9	83.3	81.0	..	..	E.	~ raining
25	29.177	86.0	85.2	81.5	..	..	..	~ all over
26	29.193	87.0	87.2	81.0	..	..	S. E.	~ scattered all over
27	29.141	92.0	92.5	81.8	..	..	S.	~ scattered
28	29.175	85.0	82.0	80.0	..	..	N. E.	~ raining
29	29.117	88.8	89.5	82.8	..	..	E.	~ all over
30	29.085	86.9	87.3	82.0	..	..	N. W.	~ scattered all over
Mean.	29.120	98.1	98.32	79.866	..	..	..

Meteorological Register kept at the Office of the Secretary to Government, N. W. P. Agra, for the Month of June, 1854.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.	Rain Gauge.	
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.		3 Ft. 2 In. from the ground.	Direction of the Wind.
1	29.059	112.6	111.8	67.9	111.0	96.8	103.9	Clear	..	N.W.
2	29.015	106.0	105.0	76.6	105.0	92.5	98.75	Ditto	..	N.
3	29.065	110.0	110.0	80.0	109.2	91.0	100.1	Ditto	..	N.W.
4	29.057	111.5	112.2	78.7	112.0	91.6	101.8	Ditto	..	W.
5	29.025	112.0	112.3	77.3	111.0	92.3	101.65	Ditto	..	N.W.
6	29.015	111.0	110.5	76.5	109.5	94.5	102.0	Ditto	..	N.W.
7	28.993	112.0	112.2	76.9	112.0	98.0	105.0	Ditto	..	N.W.
8	29.027	110.0	108.3	79.0	108.0	96.7	102.35	~ all over	..	N.W.
9	29.103	103.0	98.9	80.7	100.0	90.5	95.25	~ Ditto	0.34	N. E.
10	29.063	108.0	108.3	82.7	107.0	80.0	93.5	Clear	..	N.W.
11	28.993	108.0	108.6	81.3	107.5	91.5	99.5	~ to E.	..	W.
12	28.947	107.8	107.5	82.2	106.5	92.0	99.25	Clear	..	N.W.
13	28.937	103.5	95.5	81.0	98.0	95.0	96.5	Hazy	..	N.
14	29.051	93.7	93.5	80.4	93.0	80.0	86.5	~ scattered	0.85	N.
15	29.103	97.3	96.0	81.6	96.0	86.0	91.0	~ all over	..	W.
16	29.059	97.0	94.4	84.0	94.0	86.5	90.25	~ Ditto	..	S. W.
17	29.017	104.7	105.2	81.8	104.2	89.5	96.85	~ scattered	..	N.W.
18	29.065	100.0	101.0	82.0	103.0	89.0	96.0	~ Ditto	..	E.
19	29.041	97.0	97.3	79.5	96.0	88.0	92.0	~ all over	..	W.
20	29.073	98.5	98.0	82.5	98.0	87.0	92.5	~ scattered	..	N.
21	29.921	100.9	101.0	82.5	100.0	87.0	93.5	Hazy	..	N.
22	29.005	97.2	94.8	81.2	95.2	88.0	91.6	~ all over	..	N.
23	28.977	100.6	100.4	81.7	99.5	84.0	91.75	Ditto	0.20	W.
24	29.069	85.1	84.5	81.0	84.2	83.9	84.05	Ditto	0.30	W.
25	29.135	90.2	91.0	82.0	89.9	82.0	85.95	Ditto	0.68	..
26	29.105	91.1	91.9	82.5	91.0	80.0	85.5	~ scattered all over	..	S. E.
27	29.091	88.0	86.4	81.0	91.0	84.5	88.25	~ all over	..10	S. E.
28	29.129	84.8	82.4	79.0	82.1	85.0	83.55	~ Ditto	1.10	N. E.
29	29.095	82.1	81.1	79.1	89.5	81.8	85.65	~ Ditto	1.10	E.
30	29.037	84.9	84.5	81.0	85.5	80.5	83.0	~ scattered all over	0.38	N.W.
Mn.	29.045	100.28	99.48	80.12	99.62	88.17	93.89	..	5.05	..

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1854.

Maximum pressure observed at 9.50 A. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Direction of the Wind.	
1	29.149	85.8	85.8	80.5	..	..	N.	☼ scattered
2	29.149	85.0	85.2	80.0	..	..	N. E.	☼ ditto
3	29.211	90.0	90.6	82.6	..	..	E.	☼ towards h. and ☼ in zenith
4	29.203	90.5	91.0	82.5	..	..	E.	☼ towards do. ☼ in zenith
5	29.195	89.0	89.2	81.5	..	..	N. E.	☼ scattered
6	29.063	87.8	88.0	80.8	..	..	N. E.	☼ ditto
7	29.087	89.0	88.0	80.3	..	..	N. W.	☼ all over
8	29.101	89.9	90.7	76.9	..	..	N.	☼ scattered
9	29.131	91.0	91.3	80.6	..	..	N. W.	.....
10	29.147	92.5	93.4	79.4	..	..	N. W.	Clear
11	29.131	94.0	94.5	79.9	..	..	N. W.	Ditto
12	29.079	96.5	97.9	80.0	..	..	N. W.	Ditto
13	29.117	85.0	82.5	78.4	..	..	E.	☼ all over
14	29.139	89.0	89.9	80.6	..	..	E.	☼ scattered
15	29.167	89.5	87.3	83.3	..	..	E.	☼ all over
16	29.163	85.2	84.0	80.0	..	..	N. E.	☼ ditto
17	29.051	86.5	87.0	82.0	..	..	S. E.	☼ ditto
18	29.097	85.0	85.0	81.2	..	..	S. E.	☼ scattered all over
19	29.171	84.1	83.1	81.1	..	..	N. W.	☼ all over
20	29.145	87.9	88.3	81.0	..	..	E.	☼ all over
21	29.153	89.3	90.4	81.9	..	..	S. E.	☼ scattered
22	29.255	91.0	91.5	83.5	..	..	S. E.	☼ ditto
23	29.274	90.5	91.0	81.0	..	..	E.	☼ ditto
24	29.171	91.5	91.2	83.5	..	..	N. E.	☼ all over
25	29.155	87.8	88.2	81.7	..	..	E.	☼ scattered in h. ☼ towards hor.
26	29.195	86.5	86.4	81.0	..	..	N.	☼ all over
27	29.115	87.5	87.5	80.0	..	..	E.	☼ ditto
28	29.047	86.9	86.9	78.6	..	..	S. E.	☼ ditto
29	29.081	80.5	80.7	78.4	..	..	S. E.	☼ ditto
30	29.093	83.0	83.6	79.0	..	..	W.	☼ scattered
31	29.103	82.0	82.2	78.0	..	..	E.	☼ ditto
Mean.	29.139	88.0	88.1	80.6	..	..	..	.....

Barometer observations corrected for capillarity only.

Symbols. { ☼ Cirris.
☼ Cirro strata.
☼ Cumuli.
☼ Cumulo strata.
☼ Nimbi or Nimbus.

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1854.

Observations at apparent Noon.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Direction of the Wind.	
1	29.135	86.5	86.2	81.0	..	..	N.	↘ towards E.S.W. & ↘ towards N.
2	29.133	87.0	87.3	81.6	..	..	E.	↘ scattered
3	29.203	91.7	91.9	82.8	..	..	E.	↘ all over
4	29.191	91.2	90.2	82.6	..	..	E.	↘ ditto
5	29.183	89.7	90.0	82.0	..	..	N.	↘ scattered
6	29.035	92.0	93.0	81.8	..	..	N.	↘ ditto
7	29.077	91.3	91.6	77.9	..	..	N.	↘ ditto
8	29.107	92.7	93.1	77.3	..	..	N. W.	↘ ditto
9	29.111	95.9	96.7	81.2	..	..	N. W.	↘ ditto all over
10	29.147	95.5	96.4	80.0	..	..	N. W.	↘ scattered
11	29.115	96.3	97.3	81.2	..	..	N. W.	↘ ditto
12	29.057	100.0	100.4	80.2	..	..	N.	↘ ditto
13	29.113	86.2	85.1	77.9	..	..	E.	↘ all over
14	29.107	92.0	92.8	80.9	..	..	N. E.	↘ scattered
15	29.137	90.8	91.5	81.3	..	..	S. E.	↘ all over
16	29.089	86.0	84.0	80.0	..	..	N. E.	↘ ditto
17	29.027	89.9	90.0	82.4	..	..	N. W.	↘ ditto
18	29.069	86.6	86.6	81.5	..	..	S. E.	↘ scattered all over
19	29.147	85.7	86.3	81.5	..	..	N. E.	↘ all over
20	29.119	90.0	90.8	82.0	..	..	N. E.	↘ ditto
21	29.131	92.0	92.4	81.0	..	..	E.	↘ scattered
22	29.229	93.7	94.0	83.0	..	..	S. E.	↘ all over
23	29.209	94.5	95.6	82.0	..	..	N. E.	↘ scattered
24	29.145	92.5	92.0	84.5	..	..	E.	↘ all over
25	29.143	90.3	90.8	82.5	..	..	E.	↘ towards hor.
26	29.175	87.7	87.8	81.9	..	..	E.	↘ all over
27	29.097	89.6	90.2	80.0	..	..	E.	↘ all over
28	29.029	89.5	90.2	80.0	..	..	E.	↘ ditto
29	29.077	82.0	83.3	78.9	..	..	S. E.	↘ ditto
30	29.075	91.0	91.5	80.3	..	..	N. W.	↘ scattered
31	29.085	90.2	90.4	80.5	..	..	E.	↘ scattered
Mean.	29.119	90.6	90.9	81.0	..	..	..	.....

Meteorological Register kept at the Office of the Secretary to Government N. W. P. Agra, for the Month of July, 1854.

Minimum pressure observed at 4 P. M.

Date.	Barometer.	Temperature.			Maximum and Minimum.			Aspect of the Sky.	Rain Gauges.	
		Of Mercury.	Of Air.	Wet Bulb.	Maximum.	Minimum.	Mean.		Direction of the Wind.	3 Ft. 2 In. from the ground.
1	29.063	91.7	92.5	82.5	91.5	81.5	86.5	~ scattered	..	N.
2	29.065	90.5	91.0	82.7	90.0	80.6	85.3	~ ditto	..	E.
3	29.141	96.5	96.7	83.2	97.0	84.0	90.5	~ all over	..	E.
4	29.111	89.5	88.7	81.0	88.0	84.0	86.0	~ towards E.	..	N. E.
5	29.103	92.0	92.5	82.3	92.5	84.0	88.25	~ scattered	..	NNE.
6	28.967	96.9	97.1	83.7	96.2	83.5	89.85	~ ditto	..	S. W.
7	28.985	95.1	95.7	79.9	95.0	84.5	89.75	~ in zenith	..	N.W.
8	29.027	97.0	96.8	80.4	95.5	85.5	90.5	~ scattered	..	N.W.
9	29.049	89.7	88.7	79.5	96.0	85.0	90.5	~ all over	..	N.W.
10	29.036	99.5	99.5	81.1	98.0	85.5	91.75	~ ditto	..	N.
11	29.025	101.9	102.3	81.8	100.5	87.5	94.0	~ ditto	..	N.W.
12	28.963	103.6	103.3	82.0	101.5	89.0	95.25	~ ditto	..	N.
13	29.053	89.5	89.0	79.0	90.0	82.8	86.4	~ ditto	..	E.
14	29.039	90.5	89.4	80.9	92.5	86.0	89.25	~ towards W	..	E.
15	29.053	88.8	89.0	84.1	90.0	88.0	89.0	~ scattered	..	E.
16	29.015	85.8	82.5	79.2	84.0	84.5	81.25	~ all over	0572	E.
17	28.945	81.5	81.5	80.0	88.0	81.0	84.5	~ ditto	..	N.
18	28.985	89.6	90.3	81.1	89.0	79.5	84.25	~ sc. all over	2022	N.W.
19	29.057	89.0	88.9	84.0	89.0	80.8	84.9	~ ditto	..	N. E.
20	29.033	92.5	92.6	81.5	92.0	81.5	86.75	~ all over	..	E.
21	29.061	94.8	94.8	81.3	94.0	83.2	88.6	~ scattered	..	E.
22	29.147	95.7	95.9	82.5	95.0	84.5	89.75	~ all over	..	E.
23	29.113	97.8	97.8	82.6	97.2	87.0	92.1	~ scattered	..	N. E.
24	29.099	93.6	88.9	80.9	90.5	89.0	89.75	~ all over	0352	E.
25	29.059	90.7	87.7	81.8	90.0	81.5	85.75	~ towards w	0072	W.
26	29.065	86.9	86.6	80.5	87.0	82.0	84.5	~ all over	..	S. E.
27	29.023	92.0	92.3	81.7	91.5	82.5	87.0	~ scattered	..	S. E.
28	28.945	92.2	92.7	80.1	91.3	82.5	86.9	~ ditto	..	S. E.
29	29.047	84.2	84.2	79.2	83.4	78.0	80.7	~ all over	..	S. E.
30	29.013	94.0	94.7	95.0	95.0	79.5	87.25	~ scattered	..	N.W.
31	29.013	93.5	93.0	80.9	94.0	80.0	87.0	~ scattered	..	E.
Mn.	29.041	92.4	92.1	81.8	92.4	83.5	87.95	....	3078	..

